

DRAFT
ENVIRONMENTAL IMPACT REPORT

**SAN TOMAS BUSINESS
PARK CAMPUS PROJECT**

City of Santa Clara

August 2008

PREFACE

The document has been prepared by the City of Santa Clara as the Lead Agency, in conformance with the California Environmental Quality Act (CEQA). This Environmental Impact Report (EIR) provides environmental review appropriate for the approval of the proposed San Tomas Business Park Campus Project.

Purpose of the EIR

In accordance with CEQA, this EIR provides objective information regarding the environmental consequences of the proposed project to the decision makers who will be considering and reviewing the proposed project. The CEQA Guidelines contain the following general information on the role of an EIR and its contents:

§15121(a). Informational Document. An EIR is an informational document, which will inform public agency decision makers, and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR, along with other information that may be presented to the agency.

§15151. Standards for Adequacy of an EIR. An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that intelligently considers environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

All documents referenced in this EIR are available for public review in the Department of Planning and Inspection, 1500 Warburton Ave Santa Clara, California, on weekdays during normal business hours.

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SUMMARY

The project proposes to demolish the existing buildings (totaling 690,550 square feet) and parking lots and construct three new industrial/office buildings totaling 1,950,000 square feet and three parking structures on an approximately 35.6-acre property in the City of Santa Clara.

The following is a brief summary of significant impacts and mitigation measures addressed within the body of this EIR. The complete project description and discussion of impacts and mitigation measures can be found in the Sections 2.0 and 4.0 of this EIR.

Significant Impacts	Mitigation Measures
	Land Use
Implementation of the proposed project will result in a net increase in industrial/office space within the City of Santa Clara. Because Santa Clara has more jobs than available housing, the project could induce housing growth in areas outside the City and would exacerbate the existing jobs/housing imbalance	There is no mitigation that would reduce this impact to a less than significant level. Significant Unavoidable Impact
	Hydrology
Construction activities will result in increased erosion which could cause the degradation of water quality within San Tomas Aquino Creek.	1. Burlap bags filled with drain rock will be installed around storm drains to route sediment and other debris away from the drains. 2. Earthmoving or other dust-producing activities would be suspended during periods of high winds. 3. All exposed or disturbed soil surfaces would be watered at least twice daily to control dust as necessary. 4. Stockpiles of soil or other materials that can be blown by the wind would be watered or covered. 5. All trucks hauling soil, sand, and other loose materials would be covered and all trucks would be required to maintain at least two feet of freeboard. 6. All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites would be swept daily (with water sweepers). 7. Vegetation in disturbed areas would be replanted as quickly as possible. 8. All unpaved entrances to the site would be filled with rock to knock mud from truck tires prior to entering City streets. A tire wash system may also be employed at the request of the City. 9. A Storm Water Permit will be administered by the Regional Water Quality Control Board. Prior to construction grading for the proposed land uses, the project proponent will file a "Notice of Intent" (NOI) to comply with the General Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) which addresses measures that would be included in the project to minimize and control construction and post-construction runoff. Measures will include, but are not limited to, the aforementioned RWQCB mitigation.

Significant Impacts	Mitigation Measures
Hydrology <i>Continued</i>	
Please see previous page.	The proposed project will be required to record an Operation & Management (O&M) agreement with the City to insure continued maintenance and performance of post-construction measures including CDS units and roof-drainage systems.
Less Than Significant with Mitigation	
Vegetation and Wildlife	
Construction activities could result in the abandonment of active raptor nests or destruction of other migratory bird's nests.	1. Construction shall be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay area extends from February through August. 2. If it is not possible to schedule demolition and construction between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the ornithologist will inspect all trees and other possible nesting habitats immediately adjacent to the construction areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFG, will determine the extent of a construction-free buffer zone to be established around the nest, typically 250 feet, to ensure that raptor or migratory bird nests will not be disturbed during project construction.
Less Than Significant With Mitigation	
Hazards and Hazardous Materials	
Construction activities on the project site could have a significant impact on construction workers exposed to contaminated soils and groundwater.	1. Prior to the issuance of grading permits, shallow soil samples shall be taken to determine the location of contaminated soils with concentrations above established construction/trench worker thresholds. The soil sampling plan must be reviewed and approved by the Santa Clara Fire Department prior to initiation of work. Any contaminated soils found in concentrations above established thresholds shall be removed and disposed of according to California Hazardous Waste Regulations. The contaminated soil removed from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site. 2. A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include: a detailed discussion of the site background; preparation of a Health and Safety Plan by an industrial hygienist;

Significant Impacts	Mitigation Measures
Hazards and Hazardous Materials <i>Continued</i>	
Please see previous page.	notification procedures if previously undiscovered significantly impacted soil or free fuel product is encountered during construction; on-site soil reuse guidelines based on the California Regional Water Quality Control Board, San Francisco Bay Region's reuse policy; sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility; soil stockpiling protocols; and protocols to manage ground water that may be encountered during trenching and/or subsurface excavation activities. Prior to issuance of demolition permits, a copy of the SMP will be forwarded to the Santa Clara County Environmental Health Department, the Director of Planning and Inspection, and the Santa Clara Fire Department for review and approval.
Less Than Significant with Mitigation	
Implementation of the proposed project could expose construction workers and nearby tenants to asbestos.	1. All potentially friable ACMs shall be removed in accordance with NESGAP guidelines prior to building demolition. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos. 2. A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in accordance with the standards stated above. 3. Materials containing more than one percent asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements. 4. The demolition and removal of all building materials coated with lead-based paint will be completed in accordance with the CAL/OSHA Lead in Construction Standard requirements as found in Title 87 of the California Code of Regulations (CCR 1532.1).
Less Than Significant with Mitigation	
Cultural Resources	
Excavation of the project site may uncover unknown buried artifacts and/or human remains.	1. A qualified archaeologist will be on site to monitor the initial excavation of native soil once all pavement and engineered soil is removed from the project site. After monitoring the initial excavation, the archaeologist will make recommendations for further monitoring if it is determined that the site has cultural resources. If the archaeologist determines that no resources are likely to be found on site, no additional monitoring will be required. 2. In the event that prehistoric or historic resources are encountered during excavation and/or grading of the site, all activity within a 50-meter radius of the find will be stopped, the Director of Planning and Inspection will be notified, and the archaeologist will examine the find and make appropriate recommendations. Recommendations could include

Significant Impacts	Mitigation Measures
Please see previous page.	Cultural Resources <i>Continued</i>
	collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring would be submitted to the Director of Planning and Inspection. 3. In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.
	Less Than Significant with Mitigation
Transporation	
Implementation of the proposed project would result in a significant LOS impacts on nine study intersections and eight freeway segments.	Please see Section 4.8.3 for a complete list of the proposed mitigation measures.
	Significant Unavoidable Impact
Air Quality	
Construction of the proposed project would result in short-term air quality impacts associated with dust generation.	The following dust control measures will be implemented during all construction phases: 1. Water all active construction areas at least twice daily and more often during windy periods. 2. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. 3. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. 4. Sweep daily (preferably with water sweepers) all paved access roads on-site, parking areas and staging areas at construction sites. 5. Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets. 6. Hydroseed or apply non-toxic soil stabilizers to inactive construction areas. 7. Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.). 8. Limit traffic speeds on unpaved roads to 15 mph. 9. Install sandbags or other erosion control measures to prevent silt runoff to public roadways. 10. Replant vegetation in disturbed areas as quickly as possible.
Less Than Significant with Mitigation	

Cumulative Impacts

The proposed project will result in significant cumulative Transportation, Air Quality, and Global Climate Change impacts. Please see Section 6.0 for a complete discussion of cumulative impacts.

Alternatives to the Proposed Project

A. No Project Alternative

The CEQA Guidelines [§15126(d)4] require that an EIR specifically discuss a “no project” alternative, which should address both “the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services.” Since the project site is currently developed with industrial development, the alternative to the City approving the currently proposed project would be to maintain the site as is. If the project site were to remain as is there would be no new impacts. All the assumed traffic of those buildings is already included in the background conditions (i.e., the City’s approved trip inventory) and the air pollutants associated with vehicle trips to and from those buildings are already accounted for in the CAP.

The existing buildings on the project site are, however, approximately 30 years old and are not built to current water and energy conservation standards. If the proposed project does try to achieve LEED certification through the use of energy efficient lighting and other electrical systems, low flow water fixtures, the use of recycled materials, and other standard measures, there could be a net reduction in the carbon footprint associated with the development. Even highly efficient construction practices and new buildings, however, would probably not fully offset the impacts of the substantial traffic increases and induced population growth at locations distant from the jobs proposed.

Conclusion: Implementation of the “No Project” alternative would avoid the significant traffic and air quality impacts identified in this EIR. The No Project alternative would not, however, be compatible with current trends toward more sustainable building construction. This alternative does not meet any of the objectives of the proposed project.

B. Reduced Density Alternative

The project site is currently designated Light Industrial and is developed with 11 light industrial buildings. In an effort to avoid the significant traffic and air quality impacts that would result from the proposed project but still provide high density industrial/office space, this alternative proposes a smaller, reduced density development.

Under the reduced density alternative, the project would still propose a General Plan amendment to Office/Research and Development and a rezoning to PD – Planned Development. The project would still be developed in multiple towers with parking garages to maximize green space on the project site. The project would still include sustainable building designs in an effort to achieve LEED certification. This alternative would, however, only propose 1.5 million square feet of office and laboratory space, a reduction of 450,000 square feet compared to the proposed project.

Based on LOS calculations by Hexagon Transportation Consultants, the development of only 1.5 million square feet of industrial/office space would avoid two significant LOS impacts identified under the proposed project. The impacts to the San Tomas Expressway/Walsh Avenue (Santa Clara) intersection and the Montague Expressway/Trimble Road (San Jose and CMP) intersection would be avoided under this alternative. In addition, the following significant freeway impacts identified under project conditions would be avoided under the reduced project alternative:

- US 101, northbound between Old Bayshore Highway and North First Street
- US 101, northbound between North First Street and SR 87
- US 101, southbound between Montague Expressway and De La Cruz Boulevard
- US 101, southbound between SR 87 and North First Street
- US 101, southbound between North First Street and Old Bayshore Highway
- US 101, southbound between Old Bayshore Highway and I-880

While vehicular air pollutant emissions are reduced proportionately with reductions in project size and vehicle trip generation, the reduction in square footage would not be sufficient to reduce the identified significant unavoidable regional air quality impact to a less than significant level.

All other identified impacts, including significant traffic impacts to eight intersections and two freeway segments, would be the same or incrementally less than the impacts of the proposed project and would be reduced to a less than significant level by the General Plan policies and mitigation measures listed in this EIR.

The reduced density alternative would meet most of the objectives of the proposed project.

Conclusion: Implementation of Alternative B would avoid the some of the significant unavoidable traffic and air quality impacts identified in this EIR. This alternative does not meet all the project objectives.

C. Environmentally Superior Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the above discussion, the environmentally superior alternative is Alternative B because the project's significant environmental impacts would be less than with the proposed project. Alternative B would not meet all of the objectives of the proposed project.

SECTION 1.0 INTRODUCTION AND PURPOSE

1.1 OVERVIEW

This Environmental Impact Report (EIR) has been prepared in accordance with the requirements of the California Environmental Quality Act (CEQA) and the City of Santa Clara. The purpose of this EIR is to provide objective information regarding the environmental consequences of the proposed industrial park project to the decision makers who will be reviewing and considering the proposed project.

The project site is currently designated *Light Industrial* in the General Plan and zoned *ML – Light Industrial*. These low density light industrial areas typically are used for electronics manufacturing, research and development, and administrative facilities. The project proposes to intensify industrial development on the project site and, as a result, will require a General Plan amendment and rezoning of the project site. This EIR evaluates the proposed General Plan amendment to *Office/Research & Development*, PD rezoning, and the development of up to 1,950,000 square feet of office/industrial development on the project site.

1.2 PROJECT LOCATION

The proposed project site is comprised of three parcels located on the south side of Central Expressway, on the east and west sides of San Tomas Aquino Creek in the City of Santa Clara. One parcel is located on the west side of the creek channel immediately south of Condensa Street. The other two parcels are located on the east side of the creek channel between Central Expressway and Walsh Avenue. (see Figures 1 and 2)

1.3 PROJECT OBJECTIVES

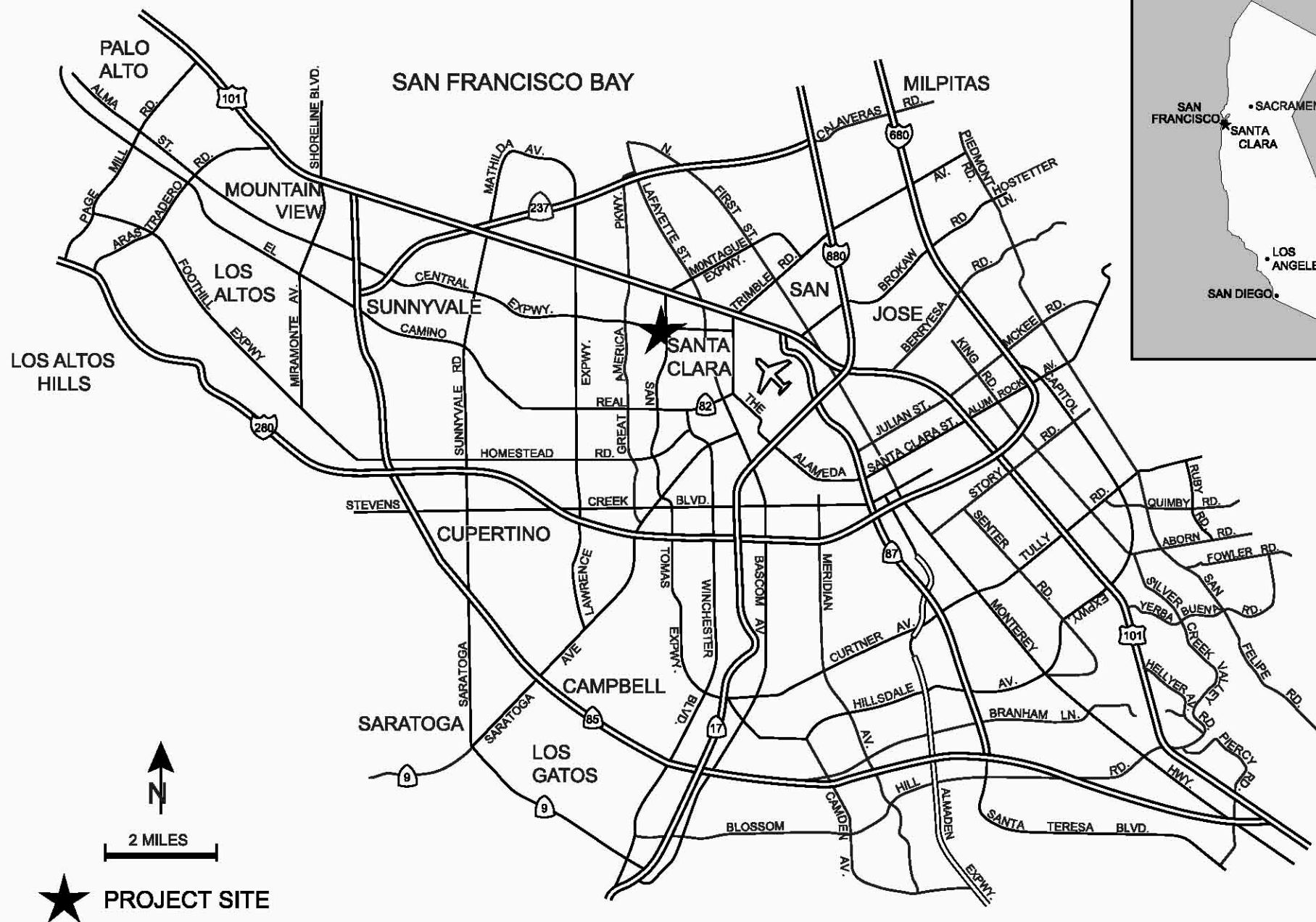
Pursuant to CEQA Guidelines Section 15124, the Lead Agency must identify the purpose of the EIR and the discretionary actions required by the Lead Agency. The purpose of this EIR is stated in the project objectives below. The discretionary actions required are listed in Section 1.4, *Uses of the EIR*.

The stated objectives of the project proponent are to:

1. Create a cohesive campus environment for future corporate tenant(s) that includes flexible and adaptable space for growth.
2. Redevelop an underutilized site into a more efficient, economically viable campus.
3. Provide for increased density in a geographically constrained area to retain jobs and foster job growth within the City of Santa Clara.
4. Develop a project that will qualify for construction financing and is economically viable to operate and maintain.

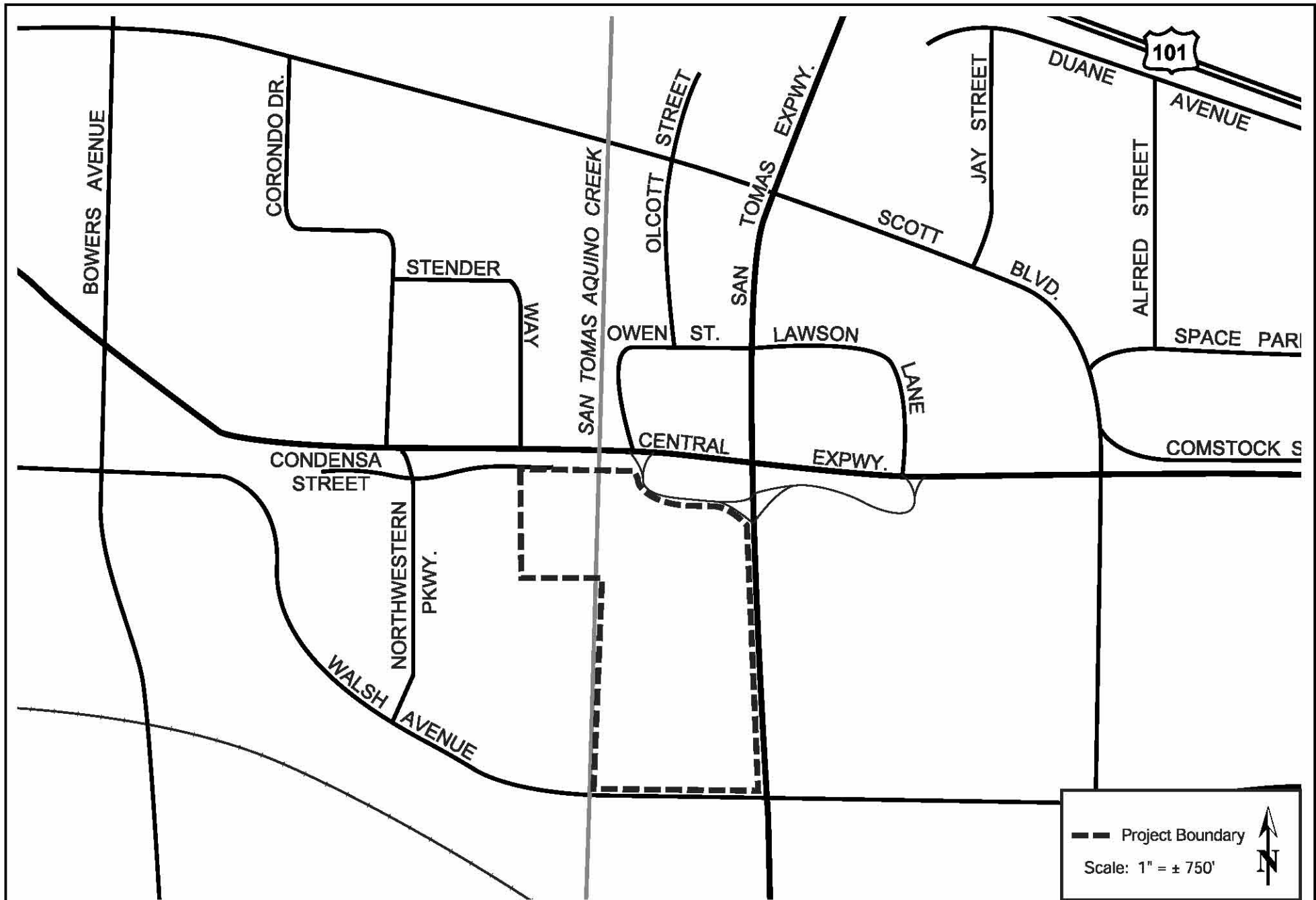
The stated objectives of the City are to:

1. Promote quality job growth within the City and region.



REGIONAL MAP

FIGURE 1



VICINITY MAP

FIGURE 2

2. Support campus development that can take advantage of transit opportunities by concentrating jobs near existing transit facilities.
3. Support development of significant employment centers on major local and regional roadways to minimize traffic on minor local streets and to facilitate transit services.

1.4 USES OF THE EIR

This Environmental Impact Report (EIR) is intended to provide the City of Santa Clara, other public agencies, and the general public with the relevant environmental information needed in considering the proposed project.

The City of Santa Clara anticipates that discretionary approvals by the City, including but not limited to the following, will be required to implement the project addressed in this EIR:

1. General Plan Amendment
2. Rezoning
3. Site and Architectural Review
4. Subdivision Map
5. Associated Public Improvements
6. Pedestrian Bridge over San Tomas Aquino Creek

The 35.6-acre project site is comprised of three developed parcels located on both sides of the San Tomas Aquino Creek channel, south of Central Expressway in the City of Santa Clara. One parcel (APN 216-28-128) is located on the west side of the creek channel immediately south of Condensa Street. The other two parcels (APNs 224-11-065 and 244-11-066) are located on the east side of the creek channel between Central Expressway and Walsh Avenue (see Figure 3). The project site is currently designated *Light Industrial* by the City of Santa Clara's adopted General Plan and is zoned *ML – Light Industrial*.

The property on the west side of the channel (2400 Condensa Street) is currently developed with an approximately 215,550 square foot four-story office/industrial building and associated surface parking lots. The property on the east side of the channel (San Tomas Business Park) is currently developed with 10 two-story office/industrial buildings totaling approximately 475,000 square feet and associated surface parking.

The City's General Plan states that the *Light Industrial* designation is intended for a campus-like environment of one- to two-story buildings on large lots for electronic, manufacturing, research and development, and administrative facilities. Office use in support of on-site or nearby manufacturing activities are also permitted where adequate employee parking and recreational space is provided. Parking structures and retail uses are also allowed.

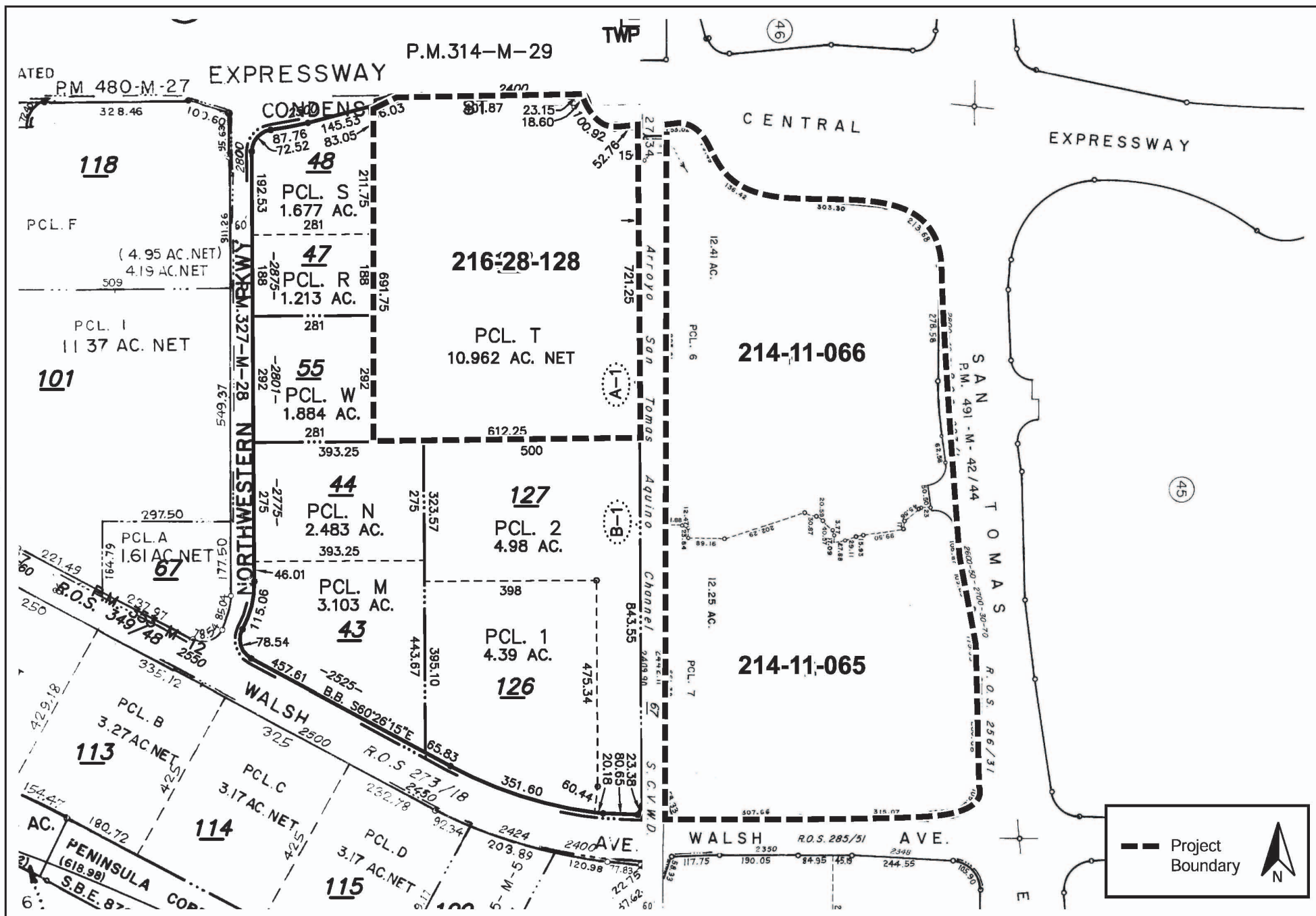
As explained in Section 3.4 of the EIR, the proposed project does not conform to the existing land use designation due to the proposed height of the office buildings and because the proposed office use would not support manufacturing activities. Therefore, the project proposes a General Plan Amendment to *Office/Research & Development* and rezoning to *PD – Planned Development* to allow for the demolition of the existing structures on the site and the construction of up to 1,950,000 square feet of office/industrial development (see Figure 4) in buildings up to 132 feet tall (99 feet to the top occupied floor and 132 feet to the top of the parapet). The proposed campus is intended as offices and high-tech lab facilities.

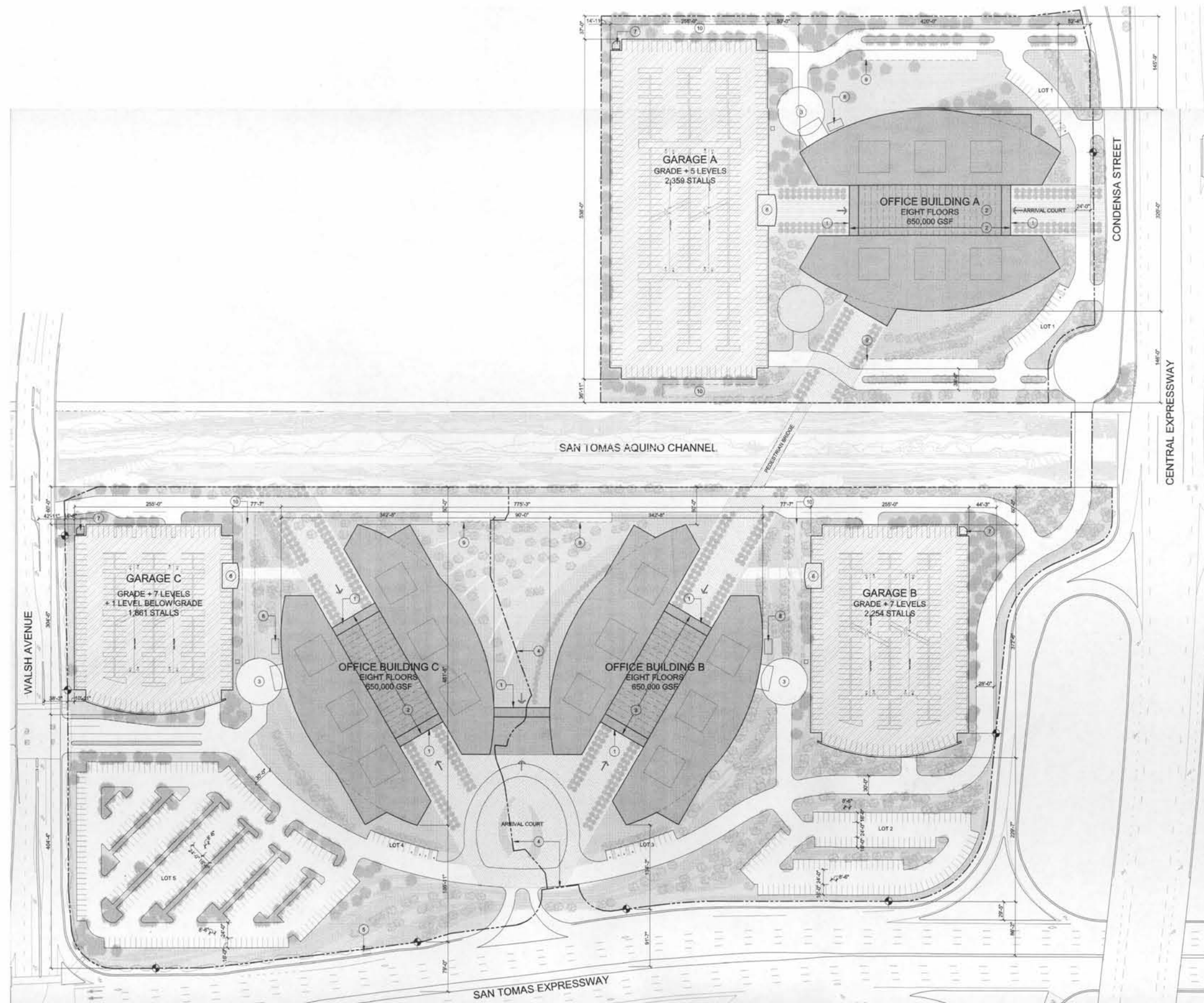
The office space will be in three mid-rise buildings¹; two located on the east side of the creek channel and one located on the west side of the creek channel. Each of the office towers would be eight stories in height with a maximum height of 132 feet including mechanical equipment on the roof.

Parking would be provided in surface lots and within three parking structures. The parking structures would range from five levels above grade to seven levels above grade. The smallest of the three parking structures (Garage A) would be located south of and adjacent to the single office building on the west side of the creek channel. The remaining two parking structures would be located on the east side of the creek, one along the northern property line (Garage B) and one along the southern property line (Garage C). Garage C will also have one level of below grade parking. The parking structures will provide 6,474 parking spaces in structures that will be up to 90 feet tall, and the surface lots will provide 576 parking spaces for a total of 7,050 parking spaces on-site.

A new private pedestrian bridge over the San Tomas Aquino Creek channel is also proposed to provide a pedestrian link for the campus. The bridge will be an approximately 15-foot wide, clear span pedestrian bridge that will be connected to the existing creek trail on the west side of the creek.

¹ The three buildings would each be designed as two towers joined by a common lobby area.





SITE PLAN

FIGURE 4

The western portion of the project site will have four driveways from Condensa Street (which is the same driveway configuration that currently exists on-site). The westernmost and easternmost driveways will connect to a small interior roadway which will provide access to the parking structure and connect to the surface parking areas. The two centrally located driveways will provide direct access to the interior access road and surface parking areas. The eastern portion of the project site will have one driveway entrance from Condensa Street via an existing private automobile bridge over the creek. The eastern portion of the project site will also have one driveway from San Tomas Expressway and two driveways from Walsh Avenue. There will be no direct access to the project site from the Central Expressway off-ramp. Each of the driveways will connect to a single interior access road that will loop through the site connecting to each of the parking structures and surface parking lots. The interior access roads and driveways will vary in width throughout the site with a minimum width of 24 feet and a maximum width of 34 feet.

Approximately 945,949 square feet (61 percent) of the project site will be open space. Of the 945,949 square feet of open space, approximately 434,206 square feet (28 percent) will be landscaping and the remaining 511,743 square feet (33 percent) will be walkways and other hardscape (not including parking lots, access roads, or driveways).

The project will apply for LEED certification and has committed to some specific measures at this time to achieve LEED certification. To become certified, the project would be required to use sustainable building practices. The following measures will be included in the project when the applicant formally submits for LEED certification.²

- Inclusion of bicycle storage and changing rooms on site to reduce automobile trips
- Design the project to provide a high ratio of open space
- Design the project to reduce the “heat island effect”³
- Design exterior lighting to minimize light trespass
- Inclusion of low-flow water fixtures to reduce potable water use
- Recycle and or salvage non-hazardous construction debris to the extent feasible
- Use recycled content building materials to the extent feasible
- Use local (i.e., within 500 miles) building materials to the extent feasible
- Use low-emitting adhesives, sealants, paints, and flooring

² The list of LEED Certification measures provided is not a comprehensive list but a general list of measures likely to be included. Other measures, which have not yet been fully defined, may also be included. Final building design, including all green building measures, will be approved prior to final architectural review and issuance of building permits.

³ Heat islands form when natural land cover is replaced with pavement, buildings, and other structures that can absorb heat. Built areas that absorb heat cause surface and air temperatures to rise.

SECTION 3.0

CONSISTENCY WITH ADOPTED PLANS & POLICIES

In conformance with Section 15125(d) of the CEQA Guidelines, the following section discusses the consistency of the proposed project with relevant adopted plans and policies.

3.1 Bay Area 2005 Ozone Strategy

The Bay Area Air Quality Management District (BAAQMD), in cooperation with the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), prepared the Bay Area 2005 Ozone Strategy (Ozone Strategy). The Ozone Strategy serves as a roadmap showing how the San Francisco Bay Area will achieve compliance with the state one-hour air quality standard for ozone as expeditiously as practicable and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The Ozone Strategy updates Vehicle Miles Traveled (VMT) and other assumptions in the 2000 Clean Air Plan (CAP) related to the reduction of ozone in the atmosphere and serves as the current CAP for the Bay Area. The consistency of the proposed project with this regional plan is primarily a question of consistency with population/employment assumptions utilized in developing the Ozone Strategy, which were based on ABAG *Projections 2002*.

Consistency: The proposed change in land use designation would allow a net increase of 1,259,450 square feet of industrial office space to be constructed on the project site. As discussed in Section 4.9 of this EIR, the increase in industrial square footage would be substantial and the project would increase jobs in an existing job center of the City. Since the City's jobs/housing ratio is already very high (jobs exceeding employed residents), this project is likely to induce additional residential development in the region, or will increase the number of persons commuting from outside the County, which would increase the number and length of vehicle trips within the region. Therefore, the project is not consistent with the CAP.

3.2 Santa Clara County Congestion Management Program

The Santa Clara Valley Transportation Authority (VTA) oversees the *Santa Clara County Congestion Management Program (CMP)*. The relevant state legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county's share of the increased gas tax revenues. The CMP legislation requires that each CMP contain the following five mandatory elements: 1) a system definition and traffic level of service standard element; 2) a transit service and standards element; 3) a trip reduction and transportation demand management element; 4) a land use impact analysis program element; and 5) a capital improvement element. The Santa Clara County CMP includes the five mandated elements and three additional elements, including: a county-wide transportation model and data base element, an annual monitoring and conformance element, and a deficiency plan element.

Consistency: The proposed project would result in significant impacts to 10 CMP intersections (see Section 4.8, *Transportation*). The construction of high density industrial land uses on land within close proximity to existing transit and housing is generally consistent with some goals of the CMP. Nevertheless, because of the identified impacts to CMP intersections, the proposed project is inconsistent with the CMP.

3.3 State Water Quality Control Board National Pollutant Discharge Elimination System Permit

The Porter-Cologne Water Quality Control Act and Federal Clean Water Act require local municipalities to implement measures to control construction and post-construction pollution entering local storm drainage systems to the maximum extent practicable. To comply with the requirements of the Porter-Cologne Water Quality Control Act and Federal Clean Water Act, the State Water Resources Control Board (SWRCB) implemented a National Pollution Discharge Elimination System (NPDES) permit for the Santa Clara Valley. Subsequent to implementation of the permit, the San Francisco Regional Water Quality Control Board (RWQCB) issued a Municipal Storm Water NPDES Permit to fifteen co-permittees. The fifteen co-permittees are the City of Santa Clara, twelve other municipalities within the Santa Clara Basin watershed area, the County of Santa Clara, and the Santa Clara Valley Water District (SDVWD). Two programs, the Nonpoint Source Pollution Program and the Santa Clara Valley Urban Runoff Pollution Prevention Program, have been implemented under the NPDES permit to regulate construction and post-construction runoff.

Nonpoint Source Management Plan

In 1988 the SWRCB adopted the Nonpoint Source Management Plan in an effort to control nonpoint source pollution in California. In December 1999, the Plan was updated to comply with the requirements of Section 319 of the Clean Water Act and Section 6217 of the Coastal Zone Act Reauthorization Amendment of 1990. The Nonpoint Source Management Plan requires individual permits to control discharge associated with construction activities. The Nonpoint Source Management Plan is administered by the RWQCB under the NPDES General Permit for Construction Activities. Projects must comply with the requirements of the Nonpoint Source Program if:

- they disturb one acre or more of soil; or
- they disturb less than one acre of soil but are part of a larger development that, in total, disturbs one acre or more of soil.

The NPDES General Permit for Construction Activities requires the developer to submit a Notice of Intent (NOI) to the RWQCB and to develop a Stormwater Pollution Prevention Plan (SWPPP) to control discharge associated with construction activities.

Consistency: Implementation of the proposed project would disturb more than one acre of soil and would require compliance with the Nonpoint Source Program. For a discussion of the measures proposed by the project to achieve compliance with the Nonpoint Source Program, refer to Section 4.4, *Hydrology and Water Quality*. With implementation of the proposed measures, the project will be consistent with the Nonpoint Source Management Plan.

Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) was developed by the RWQCB to assist co-permittees to implement the provisions of the NPDES permit. This program was also designed to fulfill the requirements of Section 304(1) of the Federal Clean Water Act, which mandated that the Environmental Protection Agency develop NPDES application requirements for storm water runoff. The Program's Municipal NPDES storm water permit includes provisions requiring regulation of storm water discharges associated with new development and development of an area-wide watershed management strategy. The permit also identifies

recommended actions for the preservation, restoration, and enhancement of the San Francisco Bay Delta Estuary.

Applicable projects consist of all new public and private projects that create 10,000 square feet or more of impervious surface collectively over the entire project site and redevelopment projects that add or replace 10,000 square feet or more of impervious surface area on the project site. Additional requirements must be met by large projects (formerly known as Group 1 projects) that create one acre or more of impervious surfaces. These large projects must control increases in runoff peak flow, volume, and duration (referred to as Hydromodification) caused by the project if the increase in stormwater runoff have the potential to cause erosion or other adverse impacts to receiving streams.

Consistency: As discussed in Section 4.4., *Hydrology and Water Quality*, the proposed project includes applicable Best Management Practices to ensure that there is no increase in erosion or sedimentation that could impact local waterways. The implementation of erosion control and storm water management practices during and after project construction will be in accordance with the SCVURPPP, NPDES permit requirements, and the City's Stormwater C.3 Guidebook. The proposed project would not result in an impact upon the conservation and restoration of streams and riparian zones or areas of special or unique ecological significance. For these reasons, the proposed project would be consistent with the SCVURPPP and NPDES permit process.

3.4 City of Santa Clara General Plan

The Santa Clara General Plan is a comprehensive, long-term plan that represents the City's official development policy. The following is a summary of major strategies and policies that apply to the proposed project.

Land Use Element

The Land Use Element has been developed to promote the best use of land through protection of desirable existing uses and the orderly development and consideration of the City's future needs while recognizing property owner's rights.

Policy 16: Encourage maintenance of the low rise medium intensity character of electronics research and development buildings in Santa Clara's central industrial area.

Policy 17: Minimize traffic by concentrating higher density employment near major transit services.

Consistency: The proposed project will remove the existing low rise industrial buildings on the project site and replace them with medium rise, higher density office buildings. Implementation of the proposed project is inconsistent with Policy 16 of the General Plan Land Use Element. Intensification of industrial/office development on the project site will, however, provide more jobs within the City on an in-fill location in an existing industrial area of the City within close proximity to transit and two major roadways (San Tomas Expressway and Central Expressway). The project, therefore, is consistent with Policy 17 of the General Plan Land Use Element.

Transportation Element

The Transportation Element has been developed to provide a safe and convenient integrated transportation system which moves people and goods from place to place efficiently and in a cost effective manner.

- Policy 4:** Minimize the number of automobiles used in commuting.
- Policy 5:** Promote increased vehicle occupancy during commute hours. Promote measures to decrease the percentage of local employees commuting alone in their automobiles.
- Policy 6:** Support a transit system that provides enhanced commuter service.
- Policy 9:** Encourage the use of bicycles and walking as alternatives to driving.

Consistency: As stated in Section 4.8, *Transportation*, the project will result in impacts to ~~10~~nine CMP intersections which cannot be mitigated to a less than significant level. The project will, however, provide an increase of jobs at an infill location within an existing job center near transit. The nearest bus stop is directly adjacent to the eastern property line of the project site on San Tomas Expressway, approximately 450 feet north of Walsh Avenue. In addition, the project proposes to utilize the Altamont Commuter Express (ACE) Yellow Shuttle and Lawrence Caltrain Bowers/Walsh Shuttle. The intensification of development on the project site would place more jobs within close proximity to transit, thereby encouraging people to use transit. The project also includes bicycle lockers and showers, and provides for good pedestrian and bicycle circulation through the site. An increase in transit use would help to support the entire transit system. The project, therefore, is consistent with the aforementioned policies of the General Plan Transportation Element.

Environmental Quality Element

The purpose of the Environmental Quality Element is to conserve and improve the environmental quality of the City and to continue an emphasis on improving the physical environment of Santa Clara.

- Policy 10:** Allow urban development only if there exists an adequate domestic water supply to serve the development and the development would not result in a reduction of water quality below standards set forth in the California Health and Safety Code and the California Administrative Code.
- Policy 11:** Maximize the use of reclaimed water for construction, maintenance and irrigation, and encourage its use elsewhere, as appropriate.
- Policy 16:** Participate on a regional basis in a Non-Point Source Control Program in order to reduce pollutants in stormwater runoff.
- Policy 17:** Maximize water retention and reduce the quantity of water runoff.
- Policy 18:** Encourage programs to improve the quality of stormwater runoff.
- Policy 19:** Protect the air quality of the City of Santa Clara and its sphere of influence. Promote land use and transportation policies which maintain air quality.

Policy 24: Reduce noise from fixed sources, construction, and special events.

Consistency: The proposed project is consistent with the water demand assumptions in the City of Santa Clara Urban Water Management Plan. As a result, the project will comply with Policy 10 of the Environmental Quality Element of the General Plan.

There is no recycled water supply within close proximity to the project site and the project does not propose to extend any existing lines. As a result, the project will not comply with Policy 11 of the Environmental Quality Element of the General Plan.

The proposed project will comply with the provisions of the NPDES permit (see Section 4.4, *Hydrology* of this document). The project, therefore, is consistent with policies 16, 17, and 18 of the Environmental Quality Element of the General Plan.

The proposed project will result in a significant unavoidable regional air quality impact. As a result, the project does not comply with Policy 19 of the Environmental Quality Element of the General Plan.

The project has mitigation measures to reduce construction related noise to a less than significant level. As a result, the project is consistent with Policy 24 of the Environmental Quality Element of the General Plan.

Public Facilities and Services Element

The purpose of the Public Facilities and Services Element is to provide and encourage, within economic capabilities, needed facilities and services that contribute to the City's safety, convenience, amenity, education and cultural enrichment.

Policy 7: Maximize solid waste disposal capacity through effective recycling.

Policy 8: Do not allow new development to exceed the City's share of wastewater treatment capacity at the San José/Santa Clara Water Pollution Control Plant.

Policy 9: Maintain the integrity and capacity of the City's stormwater drain facilities.

Consistency: The proposed project will comply with the City's mandate for recycling (see Section 4.11, *Utilities* for a full explanation). The project will not exceed the City's allowable capacity at the Water Pollution Control Plant and will decrease the amount of impermeable surfaces on the project site, thereby reducing the amount of water entering the storm drainage system. Therefore, the proposed project would be consistent with the policies of the Public Facilities and Services Element of the General Plan.

SECTION 4.0 ENVIRONMENTAL SETTING, IMPACTS, & MITIGATION

4.1 LAND USE

4.1.1 Existing Setting

The following discussion identifies the existing conditions on and adjacent to the proposed project site.

4.1.1.1 Existing Land Use

The approximately 35.6-acre project site is comprised of three parcels located on either side of San Tomas Aquino Creek. The project site is located in an existing urban/industrial area immediately south of Central Expressway and adjacent to San Tomas Expressway. The site is developed with 11 buildings with a total building coverage of 26 percent.

The western portion of the site (west of San Tomas Aquino Creek) is a single parcel that is currently developed with a 215,550 square foot, four-story office building surrounded by paved parking lots and approximately one acre of lawn area at the northeast corner of the property. The site has access from Condensa Street which is a narrow two-lane roadway that runs parallel to Central Expressway. Condensa Street ends in a cul-de-sac at the northeast corner of the project site. At the western end of the cul-de-sac, there is a small driveway which provides automotive access to an existing bridge over San Tomas Aquino Creek and onto the property on the east side of the creek. Landscape trees are located throughout the parking lots and along the roadways.

The eastern portion of the project site is two parcels that are currently developed with 10 two-story office buildings totaling approximately 475,000 square feet. The 10 buildings are surrounded by surface parking lots. The site has access from San Tomas Expressway, Walsh Avenue, and via Condensa Street across the bridge as discussed above. Landscape trees are located throughout the parking lot and along the roadways. Small lawn and landscape areas are located around the perimeters of the buildings.

None of the site or any nearby property is now or has recently been farmed.

Figure 5 shows an aerial of the project site and surrounding land uses.

4.1.1.2 Surrounding Land Uses

Development in the project area is mostly office and light industrial uses with building heights up to four stories tall. The project site is bound by Central Expressway to the north, single-story industrial buildings to the west, Walsh Avenue and a two-story industrial park complex to the south, and San Tomas Expressway to the east. Near the northeast corner of the project site, Central Expressway is slightly elevated relative to the project site as it crosses over San Tomas Expressway. On the north side of Central Expressway are several one-, two-, and three-story industrial/office buildings surrounded by surface parking lots. East of San Tomas Expressway is a large three-story office complex. South of Walsh Avenue are more of the same low density one- and two-story industrial buildings as are found to the east and north of the project site.

FIGURE 5

4.1.1.3 Existing Land Use Designation and Zoning

The City of Santa Clara General Plan is an adopted statement of goals and policies for the future character and quality of development of the community. The Zoning Ordinance establishes various districts within the City and specifies the lawful and unlawful uses within the districts to encourage the most appropriate use of land within the City. The project site's existing General Plan land use designation is *Light Industrial*. The *Light Industrial* land use designation allows for campus-like environments of one-and two-story buildings on large lots for electronics, manufacturing, research and development, and administrative facilities. Office use, in support of on-site or nearby manufacturing activities are also permitted where adequate employee parking and recreational space is provided. Parking structures and retail uses are also allowed. Consistent with the General Plan, the project site is zoned *ML – Light Industrial*.

The *ML – Light Industrial* zoning is intended to provide an optimum general industrial environment and it is intended to accommodate industries operating substantially within an enclosed building (Municipal Code 18.48.020). The following uses are permitted under the *ML – Light Industrial* zoning district as described in the City's Municipal Code (Section 18.48.030):

1. Commercial storage and wholesale distribution warehouses,
2. Plants and facilities for the assembly, compounding, manufacture, packaging, processing, repairing, or treatment of equipment, materials, merchandise, or products,
3. Incidental retail sales of industrial products or products manufactured on-site if adequate on-site customer parking is provided, display and sales occur only within a permanent building, and the industrial character of the property is maintained, and
4. Incidental and accessory buildings, storage buildings, outdoor storage, warehouses, exposed mechanical appurtenances, and the like, that comprise less than twenty-five percent (25%) of the total lot area and are shielded from public view.

The regulations for the *ML – Light Industrial* zoning district also allow for any uses in the *MP – Planned Industrial* zoning district. This district is intended to provide an environment exclusively for and conducive to the development and protection of modern large-scale administrative facilities, research institutions, and specialized manufacturing organizations, all of a non-nuisance type. Such permitted uses shall not cause objectionable noise, smoke, odor, dust, noxious gases, vibration, glare, heat, fire hazards, or other wastes emanating from the property. The district is to provide for an aesthetically attractive working environment with park-like grounds, attractive buildings, ample employee parking, and other amenities appropriate to an employee-oriented activity where problems of product handling, storage, advertising, and distribution are not of significant concern. The following uses are permitted under the *MP – Planned Industrial* zoning district as described in the City's Municipal Code (Section 18.46.030):

1. Chemical and physical science offices and laboratories,
2. Engineering and cartographic offices and laboratories,
3. Manufacture, assembly, and packaging of electronic equipment, instruments, and devices,
4. Manufacture, assembly, and packaging of pharmaceuticals,
5. Professional, financial, and administrative offices,
6. Research offices and laboratories,
7. Testing offices and laboratories,

8. Light manufacturing and activity not dealing with large volumes of product handling, storage, and distribution and that, in the opinion of the Planning Commission, are similar in character and not more detrimental to the health, safety, and general welfare of the neighborhood than any use listed above,
9. Incidental retail sales of industrial products or products manufactured on-site if adequate on-site customer parking is provided, display and sales occur only within a permanent building, and the industrial character of the property is maintained,
10. Incidental and accessory buildings, storage buildings, outdoor spaces, warehouses, exposed mechanical appurtenances, and the like comprising less than 10 percent of the total lot area and shielded from public view, and
11. Public or private automobile parking lots improved and landscaped in accordance with the provisions of this title.

Additional uses can be allowed under these zoning designations at the discretion of the Planning Commission if it is determined that the land use is of a similar nature to the permitted uses.

Under the *Light Industrial* General Plan land use designation and the *ML – Light Industrial* zoning district, building heights cannot exceed 70 feet. Under the existing designation and zoning, building coverage is limited to 75 percent of the total land area.

4.1.2 Land Use Impacts

4.1.2.1 Thresholds of Significance

For the purposes of this EIR, a land use impact is considered significant if the project would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- Conflict with an applicable habitat conservation plan or natural community conservation plan;
- Convert prime farmland, unique farmland, or farmland of statewide importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural lands;
- Conflict with existing zoning for agricultural use, or a Williamson Act Contract;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use;
- Induce substantial population growth in an area, either directly or indirectly;
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.1.2.2 Land Use Conflicts

Land use conflicts can arise from two basic causes: 1) a new development or land use may cause impacts to persons or the physical environment in the vicinity of the project site or elsewhere; or 2) conditions on or near the project site may have impacts on the persons or development introduced

onto the site by the new project. Both of these circumstances are aspects of land use compatibility. Potential incompatibility may arise from placing a particular development or land use at an inappropriate location, or from some aspect of the project's design or scope. Depending on the nature of the impact and its severity, land use compatibility conflicts can range from minor irritations and nuisance to potentially significant effects on human health and safety. The discussion below distinguishes between potential impacts *from* the proposed project *upon* persons and the physical environment, and potential impacts *from* the existing surroundings *upon* the project itself.

The project proposes a General Plan amendment to *Office/Research and Development* and rezoning to *PD – Planned Development* to allow for the demolition of the existing structures on the site and the construction of three mid-rise industrial/office buildings up to 132 feet in height and three parking structures ranging from six to eight stories. Permitted uses on the site under the PD Zoning will include offices and high-tech lab facilities.

Consistency with the General Plan Land Use Designation and Zoning

The project site is currently designated *Light Industrial* in the City of Santa Clara General Plan and zoned *ML – Light Industrial*. This designation allows for campus-like environments of one-and two-story buildings on large lots for electronics, manufacturing, research and development, and administrative facilities. Office use, in support of on-site or nearby manufacturing activities are also permitted where adequate employee parking and recreational space is provided. Parking structures and retail uses are also allowed. The *Light Industrial* land use designation and zoning has a building height limit of 70 feet. The land use designation and zoning allow a building floor area limit equal to 75 percent of the total site area.

The proposed development includes buildings up to 132 feet tall with a building coverage area equal to 39 percent of the project site. The project is inconsistent with the current land use designation due to the height of the proposed buildings and the exclusive office use. All other aspects of the proposed project are consistent with the current land use designation.

The proposed land use designation, *Office/Research and Development*, is encouraged but not restricted to the area north of U.S. 101 due to the close proximity to light rail and the ACE train. A full range of office uses is encouraged under this land use, with the primary intent of providing support services to the Silicon Valley. Prototype research and development uses are allowed along with limited manufacturing uses. Employee recreational areas, as well as public courtyards and plazas are encouraged and parking areas should be designed to not be obtrusive, but still easily accessible from the public street. Buildings are limited in height to 70 feet unless special designs or mixed uses are proposed and a rezoning to Planned Development is obtained. The proposed project would be consistent with the proposed General Plan amendment because it would create a campus-like development. With the proposed rezoning to *PD – Planned Development*, the *Office/Research and Development* designation will allow the proposed building heights. **(Less Than Significant Impact)**

Land Use Impacts

The development surrounding the proposed project site is mostly office/industrial businesses at fairly low density. The proposed office and high-tech lab facilities land use on the project site would be comparable to the existing uses in the project area; it would just be at a higher density. There are no sensitive receptors within close proximity to the project site and the proposed office/industrial development would be compatible with the surrounding land uses.

The proposed office towers would be taller than other buildings in the project area (i.e., south of Highway 101). While the buildings will result in substantial shading of the surrounding area, the buildings will not be located in close proximity to any existing public open space areas or residential land uses. Therefore, the proposed office towers will not shade any public or private open space or recreation areas. **(Less Than Significant Impact)**

4.1.2.6 Agricultural Impacts

The proposed project site is a developed industrial site and is not designated and has not been used as farmland for many years. Because the project will not conflict with existing agricultural zoning or a Williamson Act contract, or convert prime farmland to non-agricultural uses, implementation of the proposed project will have a less than significant impact on farmland. **(Less Than Significant Impact)**

4.1.2.7 Population and Housing Impacts

The jobs/housing ratio quantifies the relationship between the number of housing units required as a result of local jobs and the number of residential units available in the City. When the ratio reaches 1.0, a balance is struck between the supply of local housing and local jobs. The jobs/housing ratio is determined by dividing the number of local jobs by the number of employed residents that can be housed in local housing. This is an environmental issue because proximity between jobs and housing strongly influences travel patterns, air quality, and other environmental factors.

According to the Association of Bay Area Governments (ABAG) *Projections 2007*, the population in the year 2005 in the City of Santa Clara's Sphere of Influence was 108,700 in 41,520 households. For 2025, the projected population is 135,400 in 51,090 households. The average number of persons per household in Santa Clara is 2.58 based on the 2000 Census⁴.

The City of Santa Clara has a strong employment base with approximately 2.22 jobs per employed resident. The proposed project would construct approximately 1,259,450 square feet of net new industrial office space and replace 690,550 square feet of existing office space for an existing high-tech company already occupying office space in Santa Clara. By developing a new employment center for the aforementioned existing high-tech firm, the vacated office space would be available for new prospective employers within the City. The project would create additional job opportunities within the City and increase the jobs/housing imbalance in the City. Because Santa Clara already has a strong employment base, new workers would either have to commute from housing in other areas of Santa Clara County or from outside the County. This could induce housing growth in other areas. Since the project site has not been used for residential purposes in the past, the proposed project will not displace existing housing or people.

Implementation of the proposed project would increase the City's jobs/housing imbalance but would not displace existing housing. Since the proposed project will induce substantial population growth at other locations, the impact is significant. **(Significant Impact)**

⁴ <http://census.abag.ca.gov/cities/SantaClara.htm>

4.1.3 Mitigation and Avoidance Measures for Land Use Impacts

There is no mitigation identified that would reduce or avoid the induced population growth outside the City of Santa Clara if substantial numbers of new jobs are created by the proposed project.

4.1.4 Conclusion

The proposed project would be compatible with all adjacent and nearby land uses and would not significantly impact any designated agricultural lands. With approval of the proposed General Plan amendment and PD Zoning application, the proposed development project would comply with relevant land use policies and regulations. **(Less Than Significant Impact)**

Implementation of the proposed project will result in a net increase in industrial/office space within the City of Santa Clara. Because Santa Clara has more jobs than available housing, the project could induce housing growth in areas outside the City and would exacerbate the City's existing jobs/housing imbalance. **(Significant Unavoidable Impact)**

4.2 VISUAL AND AESTHETICS

4.2.1 Existing Setting

4.2.1.1 Visual Character of the Project Site

The approximately 35.6-acre project site is located in an urban/industrial area immediately south of Central Expressway and adjacent to San Tomas Expressway. The project site is bounded by Central Expressway which is a six-lane roadway with restricted access, single-story industrial buildings surrounded by surface parking, Walsh Avenue, a five-lane street, and a two-story industrial park complex with surface parking lots, and San Tomas Expressway, an eight-lane roadway.

The western portion of the site (west of San Tomas Aquino Creek) is currently developed with a 215,550 square foot, four-story office building surrounded by paved parking lots and approximately one acre of lawn area at the northeast corner of the property (see Photo 2). The building is glass and stucco with a mostly glass front façade. It is typical of other industrial/office buildings in the surrounding area and has no distinctive architectural style. The main parking lot is directly in front of the building, adjacent to the lawn area. The smaller parking lot is immediately south of the lawn area. Additional parking is located around the west and south sides of the building and along the east side of the lawn area. Landscape trees are sparsely located throughout the parking lots, along Condensa Street, and along the east, south and west boundaries of the site. There is an approximately 40-foot wide landscape strip along the northern property line and approximately 10-foot landscape strips along the eastern, southern, and western property lines.

The eastern portion of the project site is currently developed with 10 two-story office buildings totaling approximately 475,000 square feet. The 10 buildings are glass and stucco structures of a design typical of office construction in the 1980's (see Photo 1). These structures have distinctive terra-cotta colored tiled roofs. The 10 buildings are surrounded by surface parking lots. Landscape trees are located throughout the parking area and the site is more heavily vegetated than the other sites in the immediate project area. Large trees run along the Central Expressway off-ramp to San Tomas Expressway and along San Tomas Expressway. Smaller trees visually separate the property from Walsh Avenue. Small lawn and landscape areas are located around the perimeters of the buildings creating a pedestrian friendly atmosphere around the existing buildings.

4.2.1.2 Visual Character of the Project Area

Development in the project area is mostly light industrial uses with building heights up to four stories tall. Central Expressway is a six-lane roadway with a large landscape median separating the two directions of traffic. Near the project site, the landscape median is mostly dirt with only a few trees and shrubs. Near the northeast corner of the project site, Central Expressway is slightly elevated relative to the project site as it crosses over San Tomas Expressway. On the north side of Central Expressway are several one-, two-, and three-story industrial/office buildings surrounded by surface parking lots. These buildings are typical concrete tilt-up industrial buildings. The surface parking lots surrounding the buildings are sparsely vegetated with landscape trees. There is also an approximately 35-foot wide landscape buffer between the parking areas and Central Expressway comprised of evergreen trees and grass. The properties all appear to be well maintained.

The industrial buildings west of the project site are almost identical to those north of Central Expressway. The surface parking lots surrounding the buildings are sparsely vegetated with



Photo 1 - View of the buildings on the east side of the project site, east of San Tomas Aquino Creek, looking west from the project site.



Photo 2 - View of the building on the west side of the project site, west of San Tomas Aquino Creek, looking south from the Condensa Street cul-de-sac.

PHOTOS 1 AND 2



Photo 3 - View of the office complex on the east side of San Tomas Expressway, looking east from the project site.



Photo 4 - View of San Tomas Aquino Creek, looking south from the project site.

PHOTOS 3 AND 4

landscape trees. There is also a small landscape buffer between the parking areas and the roadway frontage, Northwestern Parkway. The properties all appear to be well maintained.

Walsh Avenue is a five-lane roadway; two-lanes in each direction and a central lane for all turning movements. Immediately south of Walsh Avenue is another 10-building industrial park complex comprised of one- and two-story concrete buildings surrounded by surface parking lots and landscape trees. The two-story industrial park complex is comprised of two concrete buildings with a small parking lot and large decorative round-about at the entrance of the main building. While there is only minimal landscaping within the parking area, there is a large landscaped area separating the buildings from Walsh Avenue.

San Tomas Expressway is an eight-lane roadway with a small center median in the vicinity of the project site. To the east of San Tomas Expressway are two three-story, glass and stucco office complexes. The northernmost complex is comprised of three buildings located around a central decorative courtyard. The buildings are surrounded by surface parking lots and landscape trees. The buildings appear to be more recently constructed than those on the west side of San Tomas Expressway. The southernmost complex is comprised of four buildings and a parking structure located around a central decorative courtyard. The buildings are of a modern architectural style and appear to be the newest office buildings in the project area. (see Photo 3)

San Tomas Aquino Creek, which bisects the project site, is channelized in this area and has little to no riparian vegetation and no trees within the creek channel or on the top of the banks. (see Photo 4)

4.2.1.3 Scenic Views and Resources

The project site and the surrounding area are relatively flat and, therefore, the site is only visible from the immediate area. The project area is not located within a designated scenic area based on the City of Santa Clara General Plan. There are no scenic views within the project area.

4.2.1.4 Light and Glare

Sources of light and glare are abundant in the urban environment of the project area, including but not limited to street lights, parking lot lights, security lights, vehicular headlights, internal building lights, and reflective building surfaces and windows.

4.2.2 Visual Impacts

4.2.2.1 Thresholds of Significance

For the purposes of this EIR, a visual impact is considered significant if the project would:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.2.2.2 Visual and Aesthetics

The proposed project will allow three office towers up to 132 feet tall and three six- to eight-story parking structures to be constructed on a site that is currently developed with two- and four-story industrial/office buildings and surface parking. While the industrial and commercial development near the project site is substantially smaller in scale than the proposed project, there are mid-rise office buildings in the general vicinity of the project site north of Highway 101. In addition, the construction of the towers and parking structures will result in a lower building coverage area and allow for more open space areas on the project site. With the proposed project, the site would be approximately 39 percent covered by buildings (including parking garages) as compared with the existing development which has approximately 26 percent building coverage.

The visual character of the area as viewed from Central Expressway, San Tomas Expressway, and Walsh Avenue will be altered somewhat by replacing the existing industrial park development with taller office buildings and parking structures. Nevertheless, the project is still visually compatible with surrounding land uses and will be more densely landscaped than the surrounding development.

Since no architectural elevations, information on building materials, or other design details are yet available, the specific visual quality of the proposed buildings is unknown. The project will, however, have to go through the City's Site and Architectural Review Committee prior to issuance of building permits. Therefore, the proposed project will have a less than significant visual impact. **(Less Than Significant Impact)**

4.2.2.3 Shade and Shadow

As stated above, the proposed office towers on the project site will be up to 132 feet in height. These structures will shade portions of the surrounding roadways, industrial buildings, and creek during the winter months in the morning and late afternoon hours. The project will not, however, shade any public open space areas or private residential open space areas.

The proposed development will not result in significant shade and shadow impacts. **(Less Than Significant Impact)**

4.2.2.3 Light and Glare

The project would include outdoor security lighting on the site, along walkways, driveways, entrance areas, and within the parking structures and parking lots. This outside lighting would comply with the City's lighting requirements (Municipal Code Section 18.48.140) and be comparable in brightness to the ambient lighting in the surrounding area. Increased lighting on the site, relative to the existing outdoor lighting, would increase the level of illumination in the area. Nevertheless, compliance with the City's lighting requirements would result in a less than significant light and glare impact. **(Less Than Significant Impact)**

4.2.3 Mitigation and Avoidance Measures for Visual and Aesthetic Impacts

No mitigation is required or proposed.

4.2.4 Conclusion

Implementation of the proposed project will have a less than significant visual impact. (**Less Than Significant Impact**)

4.3 GEOLOGY AND SOILS

The following information is based in part on a preliminary geotechnical report prepared by Treadwell & Rollo in June 2008 (see Appendix A).

4.3.1 Existing Setting

4.3.1.1 Regional Geology

The City of Santa Clara is located in the Santa Clara Valley, a relatively flat alluvial basin, bounded by the Santa Cruz Mountains to the southwest and west, the Diablo Mountain Range to the east, and San Francisco Bay to the north. In Santa Clara, the soil is comprised of clay soils that contain groundwater at shallow depths (less than 25 feet), and groundwater was found on the project site at approximately 11 feet. The subsurface conditions make the project area subject to high shrink/swell⁵ potential. These soil conditions may present geotechnical constraints to foundation design and construction.

Seismicity

The San Francisco Bay Area is classified as Zone 4 for seismic activity, the most seismically active region in the United States. Strong ground shaking can therefore be expected at the site during moderate to severe earthquakes in the general region. The significant earthquakes that occur in the Bay Area are generally associated with crustal movement along well defined, active fault zones of the San Andreas Fault system, which regionally trends in a northwesterly direction.

The project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone (formerly known as a Special Studies Zone) or Santa Clara County Fault Hazard Zone. Fault rupture through the site, therefore, is not anticipated. The most active fault zones near the project site are the San Andreas, Hayward, and Calaveras, which are located approximately 17 miles southwest, 14 miles northeast, and 16 miles east of the project site, respectively. Additional fault zones are located within 11 to 42 miles of the project site including Monte Vista-Shannon, Sargent, San Gregorio, and Mt. Diablo.

Liquefaction

Liquefaction is the transformation of water-saturated soil from a solid to a liquid state during ground shaking. Soils most susceptible to liquefaction are loose to moderately dense, saturated granular soils with poor drainage, such as silty sands or sands and gravels capped by or containing seams of impermeable sediment. A review of the State of California Seismic Hazards Zone map (San Jose West Quadrangle Official Map, February 7, 2002) indicates that the project area is located within a liquefaction zone.

Lateral Spreading

Lateral spreading occurs when a continuous layer of soil liquefies at depth and the soil layers above move toward an unsupported face, such as a shoreline slope of creek channel, or in the direction of a regional slope or gradient. Lateral spreading is commonly associated with liquefaction. San Tomas Aquino Creek is located directly adjacent to the project site. Loose to medium dense layers of saturated sandy soil were found between the historic high groundwater table and 80 feet below the

⁵ Soils with shrink/swell potential swell when wet and shrink when drying.

existing ground surface. These layers vary in thickness from two inches to seven feet. The geotechnical analysis of the soil determined that several of these saturated layers could liquefy during a major earthquake.

Settlement from the liquefaction is estimated to be between 0.25 to 1.25 inches beneath the project site.

Differential Compaction

Differential compaction occurs when earthquake vibrations cause non-saturated sand (i.e., sandy soil above the groundwater table) to settle or compact. On the project site, the soil above the groundwater table is comprised of clay and/or sandy layers with high clay content. As a result, the potential for ground settlement due to differential compaction is low.

Mineral Resources

The Santa Clara Valley was formed when sediments derived from the Santa Cruz Mountains and the Mt. Hamilton-Diablo Range were exposed by continued tectonic uplift and regression of the inland sea that had previously inundated this area. As a result of this process, the topography of the City is relatively flat and there are no significant mineral resources.

4.3.1.2 California Building Standards Code

The California Building Standards code is the California Code of Regulations (CCR), Title 24. The California Building Standards Code is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns

The project shall be required to conform to the latest adopted California Building Standards code, as amended by the City of Santa Clara, in effect at the time of project approval.

4.3.2 Geologic and Soils Impacts

4.3.2.1 Thresholds of Significance

For the purposes of this EIR, a geologic impact is considered significant if the project would:

- expose people or structures to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), landslides, or expansive soils;
- cause substantial erosion or siltation;

- expose people or property to major geologic hazards that cannot be mitigated through the use of standard engineering design and seismic safety techniques.
- result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.3.2.2 Geologic Impacts to the Project Site

The project site is located in a seismically active region and, therefore, strong ground shaking is expected during the lifetime of the proposed project. While no active faults are known to cross the project site, groundshaking on the site could damage buildings and threaten the welfare of future occupants. Furthermore, soils on the project site have a high potential for liquefaction and lateral spreading.

Geologic conditions in the project area will require that the proposed structures be designed and built in conformance with the requirements of the Uniform Building Code for Seismic Zone 4. Geologic and soils impacts resulting from conditions on the site can be mitigated by utilizing standard engineering and construction techniques. With incorporation of these measures the project will not expose people or property to significant impacts associated with the geologic conditions of the site. Erosion or landslide related hazards will be minimal due to the flat topography of the site.

Buildings will be designed and constructed in accordance with a design-level geotechnical investigation prepared for the site, which identifies specific design features that will be required for the project, including site preparation, compaction, trench excavations, foundation and subgrade design, drainage, and pavement design. Based on the preliminary geotechnical analysis, it is recommended that piles be used to support the proposed office buildings. The design-level geotechnical investigation shall be reviewed and approved by the City prior to issuance of a building permit for the project.

The proposed project will be built in conformance with the requirements of the Uniform Building Code for Seismic Zone 4 and, therefore, will not expose people or property to significant impacts associated with the geologic conditions of the site. **(Less Than Significant Impact)**

4.3.2.3 Mineral Resources

The proposed project site is within a developed urban area and it does not contain any known or designated mineral resources. Implementation of the proposed project will not result in the loss of availability of any known mineral resources within the City of Santa Clara. **(Less Than Significant Impact)**

4.3.3 Mitigation and Avoidance for Geology and Soils Impacts

There is no mitigation required or proposed.

4.3.4 Conclusion

Implementation of the proposed project will have a less than significant geologic and soils impact. **(Less Than Significant Impact)**

4.4 HYDROLOGY

The following information is based on FEMA Flood Insurance Rate Maps and the Stormwater Control Plan prepared by *Korth Sunseri Hagey Architects*. The complete stormwater control plan can be found in the plan set on file at the City of Santa Clara Planning Department.

4.4.1 Existing Setting

4.4.1.1 Flooding

Based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (Map No. 0603500003D⁶), the project site is within Zone X. Flood Zone X is defined as areas of 500 year flood, areas of 100 year flood with average depths of less than one foot or with drainage areas of less than one square mile, or areas protected by levees from a 100 year flood. San Tomas Aquino Creek itself is designated Zone AE, which is a special hazard area of 100-year flooding.

4.4.1.2 Storm Drainage System

The City of Santa Clara owns and maintains the storm drainage system which serves the project site. The eastern portion of the project site drains into a 24-inch line in Walsh Avenue and into a 42-inch line along the northern edge. These lines discharge into San Tomas Aquino Creek. The western portion of the project site drains into a 48-inch line along its southern edge and into a 54-inch line along its northern edge. These lines also discharge into San Tomas Aquino Creek. The creek carries the runoff into San Francisco Bay. There is no overland release of stormwater directly into any water body from the project site.

4.4.1.3 Water Quality

The water quality of San Tomas Aquino Creek is directly affected by pollutants contained in stormwater runoff from a variety of urban and non-urban uses. Stormwater from urban uses contains metals, pesticides, herbicides, and other contaminants, including oil, grease, asbestos, lead, and animal wastes. Currently, San Tomas Aquino Creek is not listed on the California 303(d) list⁷ or on the Total Maximum Daily Load (TMDL)⁸ high priority schedule.

Under existing conditions, the project site is almost entirely covered with impermeable surfaces, most of which are parking lots. Runoff from the site likely already contains sediments, debris, oils, metals, and other pollutants related to automobiles and the urban environment.

The Santa Clara Valley Urban Runoff Pollution Prevention Project was developed in accordance with the requirements of the revised 1995 San Francisco Bay Basin Water Quality Control Plan, for the purpose of reducing water pollution associated with urban storm water runoff. The State Water Resources Control Board (SWRCB) also administers the National Pollutant Discharge Elimination

⁶ Map 0603500003D has been revised to reflect a Letter of Map Revision (LOMR) dated October 25, 2006.

⁷ The Clean Water Act, section 303, establishes water quality standards and TMDL programs. The 303(d) list is a list of impaired water bodies.

⁸ A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The TMDL high priority schedule denotes the most severely impaired water bodies on the 303(d) list.

System (NPDES) General Permit for Construction Activities, which is intended to reduce construction-related stormwater pollution.

The SWRCB NPDES General Permit for Construction Activities requires Stormwater Pollution Prevention Plans (SWPPPs) to control discharge associated with construction activities for sites impacting one acre or more of soil. Development on such sites is required to submit a Notice of Intent (NOI) to the SWRCB and prepare a SWPPP prior to construction.

The City of Santa Clara is a co-permittee to the Santa Clara Valley Urban Runoff Pollution Prevention Program's (SCVURPPP) NPDES permit for municipal storm water discharges, issued by the Regional Water Quality Control Board (RWQCB). The NPDES permit includes requirements for water quality monitoring, identification and elimination of illicit connections and illegal dumping to the storm drainage system, increases to the municipal storm drainage system and street cleaning and public education programs. All projects that create, add, or replace 10,000 square feet or more of impervious surface area must comply with the provisions of the SCVURPPP NPDES Permit.

4.4.1.4 Groundwater

Borings taken at the project site during the spring found groundwater at a depth of approximately 11 feet below the ground surface (bgs). Groundwater levels will typically fluctuate seasonally depending on the variations in rainfall, irrigation from landscaping, and other factors.

4.4.2 Hydrology Impacts

4.4.2.1 Thresholds of Significance

For the purposes of this EIR, a hydrology, drainage, or flooding impact is considered significant if the project would:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- place within a 100-year flood hazard area structures which would impede or redirect flood flows;

- expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- inundation of the site by seiche, tsunami, or mudflow.

4.4.2.2 Flood Impacts

The project site is located between the limits of the 100-year flood and 500-year flood or certain areas subject to 100-year flooding with average depths of less than one-foot. Within the project area San Tomas Aquino Creek is designated a 100-year flood zone. The project site, however, is outside the San Tomas Aquino Creek 100-year flood zone. The City of Santa Clara Municipal Code requires all new buildings within a Special Flood Hazard Area (SFHA) to have the lowest floor elevation (excluding garages) flood proofed or raised a minimum of one foot above the base flood elevation. The proposed project must comply with the City's floodplain requirements. Compliance with this ordinance requirement is verified prior to issuance of building permits. Therefore, the proposed project would not expose persons and property to impacts from flooding. **(Less Than Significant Impact)**

4.4.2.3 Storm Drainage Impacts

Table 1 below gives a breakdown of the pervious and impervious surfaces on the project site under both existing and project conditions. The project site is currently about 79 percent impervious. The 21 percent pervious area is comprised of the existing landscaped areas located throughout the property. The proposed project will have approximately 72 percent impervious surface area. The existing storm drainage system has sufficient capacity to accommodate the existing runoff from the project site. Because the amount of impervious surfaces on-site will decrease, the amount of runoff entering the storm drainage system will decrease as well. As a result, the existing storm drainage system will continue to be sufficient to support the proposed development. **(Less Than Significant Impact)**

TABLE 1 Pervious and Impervious Surfaces On-Site						
Site Surface	Existing Conditions	%	Project Conditions	%	Net Difference	%
Impervious						
Building Footprint	396,396	26	605,734	39	+209,335	+13
Parking/Driveways/Sidewalks	830,689	53	515,104	33	-315,585	-20
<i>Subtotal</i>	1,227,085	79	1,120,838	72	-106,247	-7
Pervious						
Landscaping	324,522	21	430,769	28	+106,247	+7
Total	1,551,607	100	1,551,607	100		

4.4.2.4 Water Quality Impacts

Operational Impacts

Because the project will replace more than 10,000 square feet of impervious surface area on the project site, the project must comply with the City of Santa Clara Stormwater C.3 requirements and the SWRCB NPDES permit. In order to meet C.3. and NPDES requirements, the project will include the following measures to reduce runoff pollutant loads.

1. The pathways, driveways, and surface parking lots will drain into structural stormwater treatment systems (i.e., CDS units) installed at the on-site storm drainage inlets to filter the runoff prior to it entering the storm drainage system.
2. Rooftop runoff from the office towers and runoff from the parking structures will be routed to landscape infiltration areas and bio-retention areas surrounding the perimeters of each structure. Excess water that is not absorbed into the ground will be conveyed to the on-site storm drainage system.

The proposed treatment facilities will have sufficient capacity to treat all the stormwater runoff entering the storm drainage system. In addition, the project will be required to record an Operation & Management agreement to insure continued maintenance and performance of post-construction measures. The proposed treatment systems, combined with the BMPs proposed in the Stormwater Control Plan, and a net reduction in stormwater runoff will result in a less than significant impact on water quality. **(Less Than Significant Impact)**

Construction Impacts

Construction will involve demolition, excavation and grading activities at the project site. These construction activities could degrade water quality in San Tomas Aquino Creek because the existing on-site storm drainage system discharges directly into this waterway. Construction activities would generate dust, sediment, litter, oil, paint, and other pollutants that would temporarily contaminate runoff from the site. **(Significant Impact)**

4.4.2.4 Groundwater Impacts

Depth to groundwater at the project site is anticipated to be 11 feet below the ground surface. All proposed structures except Garage C will be above-grade and will not impact the shallow groundwater aquifer. Garage C is proposed to have one level of below grade parking which would likely expose the shallow aquifer. The below-grade structure will be subject to hydrostatic uplift pressure from the groundwater. The floors and walls of the basement structure will be waterproofed and designed to accommodate groundwater levels in accordance with recommendations of the design level geotechnical report.

The project site is currently approximately 21 percent permeable and does not contribute to recharging of the underground aquifers (i.e., is not a designated recharge area). The City of Santa Clara does rely on groundwater for a portion of its domestic water needs as do other cities in the Bay Area. With implementation of the proposed project, the permeable surface area on the project site will increase by approximately seven percent. While the proposed project will result in an increase in permeable surface area on the site, designated recharge areas have been established to help maintain the groundwater supply. It is unlikely that the increase in permeable surface area on the project site will have a measurable benefit to the groundwater supply. The proposed project will not have a significant impact on groundwater. **(Less Than Significant Impact).**

4.4.3 Mitigation and Avoidance Measures for Hydrology Impacts

The following General Plan Policies would reduce hydrology impacts of the proposed project to a less than significant level:

- *Water Resources Policy No. 16* states that the City should participate on a regional basis in a Non-Point-Source Control Program in order to reduce pollutants in storm water runoff.
- *Water Resources Policy No. 17* states that the City should maximize water retention and reduce the quantity of water runoff.
- *Water Resources Policy No. 18* states that the City should encourage programs to improve the quality of stormwater runoff.

The following project-specific measures, based on Regional Water Quality Control Board Best Management Practices, have been included in the project to reduce construction-related water quality impacts. All mitigation will be implemented prior to the start of earthmoving activities on-site and will continue until the construction is complete.

- Burlap bags filled with drain rock shall be installed around storm drains to route sediment and other debris away from the drains.
- Earthmoving or other dust-producing activities shall be suspended during periods of high winds.
- All exposed or disturbed soil surfaces shall be watered at least twice daily to control dust as necessary.
- Stockpiles of soil or other materials that can be blown by the wind shall be watered or covered.
- All trucks hauling soil, sand, and other loose materials shall be covered and all trucks would be required to maintain at least two feet of freeboard.
- All paved access roads, parking areas, staging areas and residential streets adjacent to the construction sites shall be swept daily (with water sweepers). In addition, a tire wash system may be required.
- Vegetation in disturbed areas shall be replanted as quickly as possible.
- All unpaved entrances to the site shall be filled with rock to knock mud from truck tires prior to entering City streets. A tire wash system may also be employed at the request of the City.
- A Storm Water Permit will be administered by the Regional Water Quality Control Board. Prior to construction grading for the proposed land uses, the project proponent will file a "Notice of Intent" (NOI) to comply with the General Permit and prepare a Storm Water Pollution Prevention Plan (SWPPP) which addresses measures that would be included in the project to minimize and control construction and post-construction runoff. Measures will include, but are not limited to, the aforementioned RWQCB mitigation.

- The project proponent will submit a copy of the draft SWPPP to the City of Santa Clara for review and approval prior to start of construction on the project site. The certified SWPPP will be posted at the project site and will be updated to reflect current site conditions.
- When construction is complete, a Notice of Termination (NOT) for the General Permit for Construction will be filed with the Regional Water Quality Control Board and the City of Santa Clara. The NOT will document that all elements of the SWPPP have been executed, construction materials and waste have been properly disposed of, and a post-construction storm water management plan is in place as described in the SWPPP for the site.

The following project specific measures, based on Regional Water Quality Control Board Best Management Practices, have been included in the project to reduce post-construction water quality impacts.

- As part of the mitigation for post-construction runoff impacts addressed in the SWPPP, the project will implement regular maintenance activities (i.e., sweeping, maintaining vegetative swales, litter control, and other activities as specified by the City) at the site to prevent soil, grease, and litter from accumulating on the project site and contaminating surface runoff. Storm water catch basins will be stenciled to discourage illegal dumping.

The following project specific mitigation measure has been included in the project to reduce storm water drainage impacts:

- The proposed project will be required to record an Operation & Management (O&M) agreement with the City to insure continued maintenance and performance of post-construction measures including CDS units and roof-drainage systems.

4.4.4 Conclusion

With implementation of the identified General Plan policies and mitigation measures listed above, the project will result in less than significant impacts on storm water quality. The project will not deplete the groundwater supply, substantially alter the existing drainage pattern, substantially degrade water quality, or subject residents to flood hazards or increase storm water runoff beyond the capacity of the existing stormwater drainage system. **(Less Than Significant Impact with Mitigation)**

4.5 VEGETATION AND WILDLIFE

The following information is based in part on a tree survey prepared by *John Steinbach – Certified Arborist* in December 2007 (see Appendix B).

4.5.1 Regulatory Setting

Biological resources include plants and animals and the habitats that support them. Individual plant and animal species that are listed as rare, threatened or endangered under the state and/or federal Endangered Species Act, and the natural communities of habitats that support them, are of particular concern. Sensitive natural communities (e.g., wetlands, riparian woodlands, and oak woodland) that are critical to wildlife or ecosystem function are also important biological resources.

The avoidance and mitigation of significant impacts to biological resources under CEQA is consistent with and complimentary to various federal, state, and local laws and regulation that are designed to protect these resources. These regulations often mandate that project sponsors obtain permits that include measures to avoid and/or mitigate impacts required as permit conditions, prior to the commencement of development activities.

4.5.2 Existing Setting

4.5.2.1 Overview of Habitat Found on the Project Site

The project site is comprised of two lots currently developed with 11 office buildings surrounded by surface parking lots with some landscape vegetation. The two lots are physically separated by San Tomas Aquino Creek, which is channelized in this area and has little to no riparian vegetation and no trees within the creek channel or on the top of the banks. Landscape vegetation on the project site consists of mostly shade trees with some shrubs and small grass areas. There is also one large grass area (approximately one acre in size) between the Condensa Street cul-de-sac and the one building on the west side of the creek. The site is located in a developed urbanized area adjacent to two major roadways (Central Expressway and San Tomas Expressway).

4.5.2.2 Special Status Animal Species

Special status species are those plants and animals listed under the state and federal Endangered Species Acts (including candidate species); plants listed on the California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (1994); and animals designated as Species of Special Concern by the California Department of Fish and Game. Most special status animal species occurring in the Bay Area use habitats that are not present on the project site. Salt march, freshwater marsh, and serpentine grassland habitats are not present within or immediately adjacent to the site.

4.5.2.3 Trees

Mature trees (both native and non-native) are beneficial to the human environment for the benefits they supply for resisting global climate change, and because they provide nesting and foraging habitat for raptors and other migratory birds. Therefore, a tree survey was conducted to document and evaluate the mature trees on the site.

Trees located on the project site are a mixture of native and non-native species, in varying sizes and levels of health. For the purposes of this report, trees were considered mature if they had a diameter of six inches or greater measured at 4.5 feet above grade. Within the boundaries of the project site, there are a total of 736 trees, of which 586 measured six inches in diameter or greater at 4.5-feet above the ground surface. Of the 586 mature trees surveyed 31 trees are Redwoods, 2 are alders, 175 are ash, 53 are pines, 63 are sycamores, and 10 are coast live oaks, all of which are native species. The remaining 252 mature trees are non-native. For a complete list of the trees on-site and an aerial photo showing their location, refer to Appendix B of this EIR.

4.5.3 Vegetation and Wildlife Impacts

4.5.3.1 Thresholds of Significance

For the purposes of this EIR, a vegetation and wildlife impact is considered significant if the project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local ordinances protecting biological resources, such as a tree preservation ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.5.3.2 Vegetation, Habitats, and Wildlife

The project site is completely developed and mostly paved. Vegetation on the project site consists solely of landscape trees, shrubs, several small grass areas, and a one-acre grass area. Because of the history of development on the site, no natural or sensitive habitats exist that would support endangered, threatened, or special status wildlife species. As a result, no significant vegetation and wildlife impacts are anticipated to occur, except for the loss of mature trees and possible impacts to migratory birds, raptors, and their nests.

While the site is in an urbanized area, there are numerous large trees on-site that may provide perching or nesting habitat for raptors, such as falcons, hawks, eagles, and owls, and other migratory birds. The large trees on-site are likely important to birds due to the lack of trees within the adjacent riparian corridor. Nesting raptors are among the species protected under both provisions of the Migratory Bird Treaty Act and California Department of Fish and Game (CDFG) Code Sections 3503, 3503.5, and 2800.

Demolition and construction disturbance near raptor or other migratory bird nests can result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFG. Any loss of fertile eggs, nesting raptors or other migratory birds, or any activities resulting in nest abandonment would constitute a significant impact.

Construction activities could result in the abandonment of active raptor nests or destruction of other migratory bird's nests. **(Significant Impact)**

4.5.3.3 Trees

The project proposes to remove all of the existing trees on the project site. The loss of up to 586 mature trees throughout the project site would decrease the number and variety of bird species in the project vicinity. Program viii in the Environmental Quality Element of the Santa Clara General Plan speaks to the need for development of a Tree Protection Ordinance. The program, however, was never implemented and there is currently no City policy or ordinance in place to protect trees within the City of Santa Clara. As a result, the loss of the trees does not exceed any identified threshold of significance and there is no identified significant impact.

The City's Design Guidelines do, however, require that mature trees that are proposed to be removed be replaced on-site at a 1:1 ratio with a 24-inch or 36-inch box specimen tree. Because the project is required to comply with the City's Design Guidelines, the impact of loss of the trees will be mitigated. To comply with the City's Design Guidelines, the project proposes to replace on-site trees with 24-inch to 48-inch box specimen trees. **(Less Than Significant Impact)**

4.5.4 Mitigation and Avoidance Measures for Biology Impacts

The following General Plan Policy would reduce biological impacts of the proposed project to a less than significant level:

- *Flora and Fauna Policy No. 6* states that the City should support programs for the protection of fish and wildlife and their habitats, including rare and endangered species.

The following project specific mitigation measures will be implemented during construction to avoid abandonment of raptor and other protected migratory bird's nests:

- Construction shall be scheduled to avoid the nesting season to the extent feasible. The nesting season for most birds, including most raptors, in the San Francisco Bay area extends from February through August.
- If it is not possible to schedule demolition and construction between September and January, then pre-construction surveys for nesting birds shall be completed by a qualified ornithologist to ensure that no nests will be disturbed during project implementation. This survey shall be completed no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). During this survey, the ornithologist will inspect all trees and other possible nesting habitats immediately adjacent to the construction areas for nests. If an active nest is found sufficiently close to work areas to be disturbed by construction, the ornithologist, in consultation with CDFG, will

determine the extent of a construction-free buffer zone to be established around the nest, typically 250 feet, to ensure that raptor or migratory bird nests will not be disturbed during project construction.

4.5.4 Conclusion

Implementation of the identified General Plan policy and proposed mitigation measures will reduce impacts to raptors and other migratory birds to a less than significant level. The project will have a less than significant impact on trees. **(Less Than Significant With Mitigation)**

4.6 HAZARDS & HAZARDOUS MATERIALS

The following information is based on two Phase I reports and a subsurface investigation report prepared by *All West* in November 2005 and September 2007. These reports can be found in Appendices C (Phase I reports) and D (subsurface investigation report) of this document.

4.6.1 Existing Setting

The proposed project site is located in an area of Santa Clara that is developed mostly with industrial land uses. The project site is flat and groundwater flow is in a northeast direction. Depth to groundwater on-site varies throughout the year but was found at a minimum of 11 feet below the ground surface (bgs) during the wet season.

4.6.1.1 Historical Uses of the Project Site

Property West of San Tomas Aquino Creek

Historic aerial photographs of the property west of San Tomas Aquino Creek were used to determine the project site's historic use. In 1954, the project site and adjacent properties contained orchards. It can be assumed that prior to 1954 the site was either orchards or vacant unutilized land. Condensa Street had not yet been constructed. By 1960, the project area appears as it did in the 1954 photographs. The 1971 aerial shows the western half of the project site developed with a portion of the existing building and a single parking lot at the northwest corner of the property. The building was at that time occupied by Memorex. Orchard trees are still abundant to the north, east, and southwest of the property. By 1980 the building has been enlarged to its current size and configuration. Additional parking has been added and some orchard trees still remain to the northeast and southeast. The 1990 photo shows the building unchanged. More parking has been added to the site by this time and all remnants of the orchard are gone. By 2005, the site is as it currently appears.

Since the construction of the existing building, the site has been occupied by Memorex, 3Com, Adobe Systems, Coherent Medical Group, and Lumenis.

Property East of San Tomas Aquino Creek

Historic aerial photographs of the property east of San Tomas Aquino Creek were used to determine the project site's historic use. In 1954, the project site and adjacent properties contained orchards. It can be assumed that prior to 1954 the site was either orchards or vacant unutilized land. A house and associated structures were present on the northeastern portion of the property fronting a road that predated Central Expressway. By 1960, the project area appears as it did in the 1954 photographs. The 1971 aerial shows the property fallow and vacant. The orchard, house, and accessory structures were no longer present. Central Expressway and San Tomas Expressway have been built by this time and the existing driveway entry ramp from San Tomas Expressway into the project site is present. By 1980 the property is still undeveloped. The 1984 photo shows the 10 existing office buildings and the surrounding parking lots. Between 1984 and 2004, no apparent major changes to the property were made. The 2004 photo shows the emergency generator shelter to the west of Building 10. Otherwise, the site is as it currently appears.

Since construction of the existing buildings, the site has been occupied by a variety of businesses. A complete list of these businesses can be found on Page 8 of the 2600 – 2880 *San Tomas Expressway* Phase I report found in Appendix C of this EIR.

4.6.1.2 On-Site Sources of Contamination

Property West of San Tomas Aquino Creek

The building on the western half of the project site has been used for office, manufacturing, and research and development. Memorex used the site for manufacturing, though the exact nature of the operations could not be determined. The site was used for storage of computer networking equipment by 3Com. Adobe Systems used the site for computer software testing, packaging, and storage. The last two companies conducted research and development of laser medical devices.

Historical use of hazardous materials on-site is characterized as small volume and there is no evidence of underground storage tanks on the property. There are four above-ground tanks in the southeast corner of the building inside a concrete containment area. One 336 gallon diesel tank was used to fuel an on-site generator and another tank was used for gasoline storage. The last two tanks are not labeled, but appear to have been used for storage of water softening chemicals. There are no records of soil or groundwater contamination resulting from chemicals stored and/or used on the project site. The site does, however, have groundwater contamination.

Groundwater monitoring was previously performed on-site to determine if VOCs found in the groundwater on-site were the result of solvent storage tanks utilized by Memorex. It was concluded in the subsurface investigation report that the contaminants found in the groundwater samples were not the result of previous on-site operations but that the contaminants migrated from an unknown source located up-gradient and south of the site.

Due to the nature of the proposed development, the concerns about contaminated groundwater would be vapor intrusion into the proposed buildings and associated risk to occupants of those buildings, and risk of exposure to construction workers. The contaminants found were the chlorinated solvent TCE and a by-product of the breakdown of TCE, DCE. The maximum concentrations of the solvents found in the groundwater were compared to the established Environmental Screening Levels (ESLs) threshold for vapor intrusion⁹ of these contaminants. The vapor intrusion ESL thresholds established for the identified contaminants are well above the maximum concentrations measured in the groundwater samples. That presence of any chemical below the corresponding ESL is presumed to not pose a significant risk to human health for future occupants of the proposed project.

Property East of San Tomas Aquino Creek

The buildings on the eastern half of the project site have been used for office, minor assembly of electrical components, research and development, shipping and receiving. The use of toxic or flammable materials and petrochemicals, which require regulatory agency notification, were not observed on-site. Based on the Santa Clara Fire Department (SCFD) records, the site has not been utilized for manufacturing purposes.

⁹ The ESLs used are based on the San Francisco Bay – Regional Water Quality Control Board document *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, February 2005.

Historical use of hazardous materials on-site is characterized as small volume and there is no evidence of underground storage tanks on the property. There is one above-ground 2,500-gallon diesel tank that supplies two emergency generators on the site. There are no records of soil or groundwater contamination resulting from chemicals stored and/or used on the project site and no evidence that on-site operations have resulted in contamination of either the soil or groundwater. Nevertheless, because no formal soil and/or groundwater sampling was completed on this portion of the project site, it must be assumed that this area would have the same groundwater contamination as the western portion of the project site.

Asbestos and Lead Based Paint

Friable asbestos is any asbestos containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Non-friable ACMs are materials that contain a binder or hardening agent that does not allow the asbestos particles to become airborne easily. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl asbestos floor tiles, and transite siding made with cement. Non-friable ACMs can pose the same hazard as friable asbestos during remodeling, repairs, or other construction activities that would damage the material. Use of friable asbestos products was banned in 1978.

An asbestos survey for the building west of San Tomas Aquino Creek was completed and identified likely ACMs on the project site. Specifically identified materials included floor tiles and linoleum flooring, ceiling and wall materials, bulk insulation, and fireproofing. At the time of the survey, all these materials were in good condition and no friable asbestos was found.

In 1978, the Consumer Products Safety Commission banned paint and other surface coating materials containing lead. The existing building on the western portion of the project site was constructed around 1971. Due to the age of that building, it is likely that the building materials included lead-based paint.

Because the 10 buildings on the eastern portion of the project site were constructed after 1980 it is unlikely that lead based paints are present. In addition, due to the construction date of the buildings, it was not necessary that an asbestos survey be performed for those structures.

4.6.1.3 Off-Site Sources of Soil and Groundwater Contamination

A review of environmental databases was completed to evaluate whether any nearby subject properties have the potential to impact the project site. The following is a summary of the database results.

EPA National Priorities List

The EPA National Priorities List (NPL) identifies uncontrolled or abandoned hazardous waste sites. To appear on the NPL, sites must have met or surpassed a predetermined hazard ranking system score, been chosen as a state's top priority site, pose a significant health or environmental threat, or be a site where the EPA has determined that remedial action is more cost-effective than removal action. The NPL list was reviewed for any sites within one mile of the project site. Four sites were identified and are described below.

- Applied Materials – 3050 Bowers Avenue: Monitoring wells show the groundwater to be contaminated with chlorinated hydrocarbons. This site is located approximately 1,576 feet west northwest of the project site, cross/down-gradient of the site.
- Syntertek Incorporated – 3050 Coronado Boulevard: Shallow and deep aquifers beneath the facility are contaminated with chlorinated hydrocarbons. This site is located approximately 1,442 feet northwest of the project site, down-gradient of the site.
- Intel Magnetics – 2880 Northwestern Parkway: Monitoring wells show the groundwater to be contaminated with chlorinated hydrocarbons. This site is located approximately 3,400 feet west of the project site, cross-gradient of the site.
- Intel Corporation – 2880 Northwestern Parkway: Monitoring wells show the groundwater to be contaminated with chlorinated hydrocarbons. This site is located approximately 947 feet west of the project site, cross-gradient of the site.

Intel is the closest facility to the project site but is located cross-gradient and, given the direction of groundwater flow, it is unlikely that contaminant from this property would impact the project site. The remaining sites are more than 0.25 miles from the project site and either cross- or down-gradient. Based on their distances and location relative to the project site, there is a very low potential for the project site to be impacted by these facilities.

EPA Comprehensive Environmental Response, Compensation and Liability Information System

The EPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) identifies hazardous waste sites that require investigation and possible remedial action to mitigate negative impacts on human health or the environment. The CERCLIS database was reviewed for any sites within one-half mile of the project site. In addition to the Applied Materials, Syntertek, and Intel Magnetics sites discussed above, one other CERCLIS site was identified. Integrated Device Technologies, located at 2880 Northwestern Parkway is located approximately 1,900 feet north northwest of the project site, down-gradient of the site.

Because of the distance from the project site and because the facility is hydraulically down-gradient from the site, the facility would not pose a significant risk to occupants of the proposed project.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) Notifiers List identifies any RCRA treatment, storage, or disposal sites. The list was reviewed for any sites within one mile of the project site, but no sites were identified.

The RCRA Corrective Activity (CORRACTS) list identifies all nationally defined corrective action core activities that have occurred for every handler that has had a corrective action activity. The database was reviewed for sites within one mile of the project site and three sites were identified. Two of the sites are hydraulically down-gradient from the site and would not pose a significant risk to occupants. The third site is Bayday Chem located approximately 2,410 feet southeast and cross-gradient of the property. The site has been given a low corrective action status and based on its status and distance from the project site it does not pose a serious risk to the project site.

Department of Toxic Substances Control

The Department of Toxic Substances Control (DTSC) lists sites under investigation for actual or potential contamination risks to human health or the environment. The list was reviewed for any sites within one mile of the project site. There are 18 DTSC listed sites within one mile of the project site. Only two of these sites, however, are up-gradient of the project site. Santa Clara Circuits is located approximately 3,975 feet southeast of the site and Technical Coatings is located approximately 4,803 feet east southeast of the site. While both sites are up-gradient of the project site, their distance from the site (over one-half mile) makes it highly unlikely that soil and/or groundwater contamination from these facilities would impact the project site.

California Regional Water Quality Control Board Spills, Leaks, Investigations, and Cleanup

The Spills, Leaks, Investigations, and Cleanup (SLOC) is a California Regional Water Quality Control Board (RWQCB) list of sites that have reported spills, leaks, investigative activities, and/or cleanup actions. The list was reviewed for any sites within one-half mile of the project site. There are nine SLIC sites within one-half mile of the project site. Of these sites, six are down-gradient and three are cross-gradient. Based on the distance of the facilities from the project site and their location relative to groundwater directional flow, these sites do not pose a risk to the project site.

RWQCB Leaking Underground Storage Tanks

A database search of the Leaking Underground Storage Tank (LUST) list identified one site within one-half mile of the project site. There are 13 LUST sites within one-half mile of the project site. Two sites are up-gradient of the project site. Intel Corporation, located at 2625 Walsh Avenue, is approximately 947 feet west of the project site. Pacific Maintenance Co., located at 2294 Walsh Avenue, is approximately 1,576 feet east of the project site. Both of these facilities have received case closure status and are not expected to impact the project site.

4.6.2 Hazardous Materials Impacts

4.6.2.1 Thresholds of Significance

For the purposes of this EIR, a hazardous materials impact is considered significant if the project would:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;

- for a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.6.2.2 On-Site Hazards

Agricultural Land Uses

The project site was occupied by orchards until approximately 1970 when clearing of the site and construction of the existing buildings began. Because of the past agricultural uses on-site, it is reasonable to assume that pesticides and other agricultural chemicals were used as part of the normal agricultural operations. It is common to find arsenic, lead, and DDT residue in the soil in Santa Clara County from historic farming operations.

Approximately 72 percent of the project site will be completely capped with buildings and hardscape. While the remaining portion of the site will be landscaped, it is unlikely that contamination levels would exceed the industrial ESLs which are substantially less stringent than residential ESLs or that there would be any direct exposure to the soil by future occupants of the site. As a result, there is no risk of impacts to future office workers. Implementation of the proposed project could, however, result in impacts to construction workers from exposure to soil contamination related to agricultural operations. **(Significant Impact)**

Industrial Land Uses

Groundwater monitoring on the western portion of the project site found contamination in levels below the established ESLs for industrial land uses. Aside from residual agricultural contamination, no other contamination to soil or groundwater is known to be present on the project site.

While the known contamination on-site is below established safety thresholds, those thresholds are only relevant to persons occupying the site after construction and are not relevant for workers exposed during construction activities. Implementation of the proposed project will expose construction workers to contaminated soil and possibly contaminated groundwater. **(Significant Impact)**

Asbestos and Lead Based Paint

Non-friable ACMs are likely to be present in the building on the western portion of the project site. The project proposes to demolish the existing building which could release asbestos particles and expose construction workers and nearby building tenants to harmful levels of asbestos. **(Significant Impact)**

Demolition of the aforementioned building, which also likely contains lead-based paint, could create dust at concentrations which would expose construction workers to potential health risks. State regulations require that air monitoring be performed during and following renovation or demolition activities at sites containing lead-based paint. Appropriate modifications to renovation/demolition activities would be required if airborne lead levels exceed the current Federal OSHA action level of

30 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Surveys have determined that the paint on and in the buildings is still bonded to the building materials and, therefore, its removal is not required prior to demolition. It will be necessary, however, to follow the requirements outlined by Cal/OSHA Lead in Construction Standard, Title 87, California Code of Regulations (CCR 1532.1) during demolition.

If any lead-based paint is found to be peeling, flaking, or blistered prior to removal of the buildings, it would need to be removed prior to demolition because it is assumed that such paint will become separated from the building components during demolition activities. As a result, it must be managed and disposed of as a separate waste stream.

Removal of lead-based paint coated building materials in compliance with state law will have a less than significant impact. **(Less Than Significant Impact)**

4.6.2.3 Off-Site Hazards

As discussed in Section 4.6.1.3., several facilities listed on various state and federal hazardous materials lists were identified within one mile of the project site. All of the facilities have either been issued case close status, are a substantial distance from the project site, or are located down-gradient or cross-gradient from the project site. Due to the distance of these facilities and the direction of groundwater flow, there is a very low probability for additional contaminated groundwater from those identified sites to migrate onto the project site. The sites are too far a distance from the project site for contaminated soil to impact the project site.

The depth to groundwater on the project site is a minimum of 11 feet below the ground surface. Contaminants in the groundwater could, over time, leach into the soil around the shallow aquifer. Because of the depth of the groundwater, it is unlikely that the soil contamination resulting from the leaching of contaminants would migrate to the ground surface. In addition, because the site will be developed as an industrial land use, there would be no long term exposure to any persons on-site. Construction workers will, however, be exposed to contaminated groundwater and possibly contaminated soil due to the proposed underground parking level in Garage C. **(Significant Impact)**

4.6.3 Mitigation and Avoidance Measures for Hazardous Materials Impacts

The following General Plan Policy would reduce hazardous materials impacts of the proposed project to a less than significant level:

- *Hazardous Materials Policy No. 4* states that the City should regulate hazardous materials use, storage, disposal and clean-up to protect the health of humans and the environment within the City of Santa Clara.

The following project specific mitigation measures will be implemented during construction to reduce significant hazardous materials impacts:

- Prior to the issuance of grading permits, shallow soil samples shall be taken to determine the location of contaminated soils with concentrations above established construction/trench worker thresholds. The soil sampling plan must be reviewed and approved by the Santa Clara Fire Department prior to initiation of work. Any contaminated soils found in concentrations above established thresholds shall be removed and disposed of according to California Hazardous Waste Regulations. The contaminated soil removed from the site shall be hauled off-site and disposed of at a licensed hazardous materials disposal site.

- A Site Management Plan (SMP) will be prepared to establish management practices for handling impacted groundwater and/or soil material that may be encountered during site development and soil-disturbing activities. Components of the SMP will include: a detailed discussion of the site background; preparation of a Health and Safety Plan by an industrial hygienist; notification procedures if previously undiscovered significantly impacted soil or free fuel product is encountered during construction; on-site soil reuse guidelines based on the California Regional Water Quality Control Board, San Francisco Bay Region's reuse policy; sampling and laboratory analyses of excess soil requiring disposal at an appropriate off-site waste disposal facility; soil stockpiling protocols; and protocols to manage ground water that may be encountered during trenching and/or subsurface excavation activities. Prior to issuance of demolition permits, a copy of the SMP will be forwarded to the Santa Clara County Environmental Health Department, the Director of Planning and Inspection, and the Santa Clara Fire Department for review and approval.
- All potentially friable ACMs shall be removed in accordance with NESGAP guidelines prior to building demolition. All demolition activities will be undertaken in accordance with Cal/OSHA standards contained in Title 8 of CCR, Section 1529, to protect workers from exposure to asbestos.
- A registered asbestos abatement contractor shall be retained to remove and dispose of ACMs identified in accordance with the standards stated above.
- Materials containing more than one percent asbestos are also subject to BAAQMD regulations. Removal of materials containing more than one percent asbestos shall be completed in accordance with BAAQMD requirements.
- The demolition and removal of all building materials coated with lead-based paint will be completed in accordance with the CAL/OSHA Lead in Construction Standard requirements as found in Title 87 of the California Code of Regulations (CCR 1532.1).

4.6.4 Conclusion

Implementation of the identified General Plan policy and proposed mitigation measures would reduce hazardous materials impacts to construction workers and nearby sensitive receptors to a less than significant level. **(Less Than Significant Impact with Mitigation)**

4.7 CULTURAL RESOURCES

The following information is based on an archaeological literature review prepared by *Holman & Associates* in December 2007. The report is on file at the City of Santa Clara Department of Planning and Inspection.

4.7.1 Existing Setting

Although there are no existing conditions or immediate evidence that would suggest the presence of historic or prehistoric resources, the project site is located in a culturally sensitive area due to known prehistoric and historic occupation of Santa Clara, and being adjacent to San Tomas Aquino Creek. Native American settlements are commonly associated with the abundant food supply in the Santa Clara Valley, and because the project site is adjacent to San Tomas Aquino Creek the likelihood that historic artifacts may be located on the project site is increased. In addition, historic occupation of Santa Clara has been well documented, and the City has a strong record reflecting early settlement by Spanish missionaries.

4.7.1.1 Prehistoric and Historic Resources

Based on the archaeological literature review conducted at the Northwest Information Center (at Sonoma State University), there are no recorded historic or prehistoric sites located within the boundaries of the project site. It should be noted, however, that there is no record that the property was inspected prior to the existing buildings being constructed.

The property has been determined to have a moderate to high potential for containing buried prehistoric resources. This determination was made based on the site's close proximity to San Tomas Aquino Creek and, to a lesser extent, Saratoga Creek. While both of these creeks are currently located within artificial channels, the entire project site would have been located inside the prehistoric/historic riparian zone of the two creeks which was an ideal habitat in prehistoric times for seasonal camps and villages. Many villages of this type were buried by three to 10 feet of silt deposited during flooding episodes.

4.7.1.2 Historic Buildings

The existing buildings on the project site are less than 30 years old and are of no particular architectural style. None of the buildings on the project site would be eligible for the California or National Registers and none of the structures have been identified by the City of Santa Clara as architecturally or historically significant.

4.7.2 Cultural Resources Impacts

4.7.2.1 Thresholds of Significance

For the purpose of this EIR, a cultural resources impact is considered significant if the project would:

- cause a substantial adverse change in the significance of a historical resource;
- cause a substantial adverse change in the significance of an archaeological resource;
- directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or
- disturb any human remains, including those interred outside of formal cemeteries.

4.7.2.2 Impacts to Cultural Resources

In spite of the fact that development on the project site over the last 30 years has failed to generate reports of archaeological finding, the site has a moderate to high potential for containing prehistoric archaeological resources due to the close proximity of San Tomas Aquino Creek and Saratoga Creek. As a result, implementation of the proposed project could result in the discovery of Native American artifacts and/or human remains. **(Significant Impact)**

4.7.2.3 Impacts to Historic Buildings

As stated above, none of the buildings on the project site would be eligible for the California or National Registers and none of the structures have been identified by the City of Santa Clara as architecturally or historically significant. Therefore, implementation of the proposed project would have a less than significant impact on historic structures. **(Less Than Significant Impact)**

4.7.3 Mitigation and Avoidance Measures for Cultural Resources

The following General Plan Policies would reduce cultural resources impacts of the proposed project to a less than significant level:

- *Archaeology Program xlvii* states that the City should continue to require archaeological investigations of all proposed construction sites in sensitive areas, such as within 500 feet of a natural watercourse. An archaeological survey shall be prepared by the project applicant to the City's satisfaction, including limited subsurface excavation, and possibly to include a detailed subsurface investigation when important resources cannot be avoided.
- *Archaeology Program xlviii* states that the City should continue to require prior to development, whenever archaeological remains are found, a plan for preserving, removing, and recording the find, to be prepared to the City's satisfaction by a professional archaeologist.

The following project-specific mitigation measures will be implemented during construction to avoid significant impacts to unknown cultural resources:

- A qualified archaeologist will be on site to monitor the initial excavation of native soil once all pavement and engineered soil is removed from the project site. After monitoring the initial excavation, the archaeologist will make recommendations for further monitoring if it is determined that the site has cultural resources. If the archaeologist determines that no resources are likely to be found on site, no additional monitoring will be required.
- In the event that prehistoric or historic resources are encountered during excavation and/or grading of the site, all activity within a 50-meter radius of the find will be stopped, the Director of Planning and Inspection will be notified, and the archaeologist will examine the find and make appropriate recommendations. Recommendations could include collection, recordation, and analysis of any significant cultural materials. A report of findings documenting any data recovery during monitoring would be submitted to the Director of Planning and Inspection.

- In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find will be stopped. The Santa Clara County Coroner will be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC) immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

4.7.4 Conclusion

Implementation of the identified General Plan policies and proposed mitigation measures will reduce cultural resources impacts to a less than significant level. **(Less Than Significant With Mitigation)**

4.8 TRANSPORTATION AND CIRCULATION

The information provided in this section is based on a traffic analysis prepared by *Hexagon Transportation Consultants* in June 2008. The complete traffic report is provided in Appendix E.

4.8.1 Existing Setting

4.8.1.1 Existing Roadway Network and Transportation Facilities

Regional Access

Regional access to the project site is provided via US 101 which is described below.

U.S. Highway 101 (US 101) is an eight-lane roadway within the vicinity of the project site with three mixed-flow lanes and one high occupancy vehicle (HOV)¹⁰ lane in each direction. Regional access from US 101 to the project would be via interchanges with De La Cruz Boulevard/Trimble Road, San Tomas Expressway/Montague Expressway, and Great America Parkway/Bowers Avenue.

Local Access

Local access to the site is provided by San Tomas Expressway/Montague Expressway, Central Expressway, Scott Boulevard, Bowers Avenue/Great America Parkway/Kiely Boulevard, Lafayette Street, De La Cruz Boulevard, Walsh Avenue, Northwestern Parkway, and Condensa Street. These roadways around the project site are described below.

San Tomas Expressway is a north-south roadway that extends from US 101 southward through Santa Clara into Campbell where it becomes Camden Avenue (at its interchange with State Route 17) in San José. North of El Camino Real, San Tomas Expressway is an eight-lane roadway with one HOV lane in each direction. South of El Camino Real, the roadway narrows to six lanes, including one HOV lane in each direction. San Tomas Expressway provides access to the project site via Walsh Avenue and a right in/right out driveway north of Walsh Avenue.

Montague Expressway is an east-west roadway that extends from Interstate 680 (I-680) and extends west to US 101 where it becomes San Tomas Expressway. Montague Expressway is an eight-lane roadway with one HOV lane in each direction.

Central Expressway is an east-west roadway that extends from its junction with De La Cruz Boulevard west to Palo Alto. Central Expressway is a six-lane roadway with one time restricted HOV lane in each direction. This roadway provides access to the project site via Northwestern Parkway and San Tomas Expressway.

Bowers Avenue is a north-south thoroughfare that extends from State Route 237 (SR 237) to US 101. North of Walsh Avenue it is a six-lane roadway and south of Walsh Avenue it transitions into a four-lane roadway. North of US 101, Bowers Avenue becomes Great America Parkway and south of El Camino Real its name changes to Kiely Boulevard.

¹⁰ An HOV lane may also be referred to as a carpool lane for vehicles carrying two or more people and other designated vehicles.

Great America Parkway is a north-south thoroughfare that extends from SR 237 to US 101. It is an eight-lane roadway south of Mission College Boulevard and a six-lane roadway between Tasman Drive and SR 237. Between Mission College Boulevard and Tasman Drive it has four lanes in the northbound direction and three lanes in the southbound direction.

Walsh Avenue is an east-west thoroughfare that extends from Lafayette Street to Bowers Avenue where it becomes Kifer Road. East of San Tomas Expressway it is a four-lane road without a median. In the project area Walsh Avenue has a raised median with left turn lanes. West of the project site it has a two-way center left-turn lane. Walsh Avenue provides direct access to the project site via one full-access driveway at a signalized intersection 350 feet west of San Tomas Boulevard and one limited-access driveway at an unsignalized intersection 250 feet to the west of the signalized intersection.

Northwestern Parkway is a north-south local roadway that extends from Central Expressway to Walsh Avenue. It is a two-lane road without a median.

Condensa Street is an east-west local roadway that extends approximately 900 feet east from Northwestern Parkway ending in a cul-de-sac at the project site. A bridge across San Tomas Aquino Creek connects to the Condensa Street cul-de-sac, providing vehicular and pedestrian access between the eastern and western portions of the project site. Condensa Street provides direct access to the project site via four full-access driveways.

Kiely Boulevard is a north-south thoroughfare that extends from its connection with Bowers Avenue at El Camino Real to Stevens Creek Boulevard. Kiely Boulevard is a four-lane roadway.

Scott Boulevard is a north-south thoroughfare that extends from Oakmead Parkway to Saratoga Avenue. It is a four-lane roadway which is divided with intermediate median breaks for left-turn lanes north of Central Expressway and has a two-way center left-turn lane south of Central Expressway.

Lafayette Street is a north-south thoroughfare that extends from SR 237 to Bellomy Street where it becomes Washington Street. It is a four-lane roadway with a center two-way left turn lane.

De La Cruz Boulevard is an approximately one mile long north-south thoroughfare that connects Trimble Road at Central Expressway in the north with Coleman Avenue and El Camino Real in the south.

4.8.1.2 Existing Bicycle and Pedestrian Facilities

Pedestrian Facilities

Pedestrian facilities are limited in the project area and are comprised of sidewalks and crosswalks. In the vicinity of the project site, there is a small segment of sidewalk on the east and west sides of San Tomas Expressway from the Walsh Avenue intersection north to nearby bus stops. On the west side of the roadway, the bus stop is directly adjacent to the project site. Walsh Avenue has a sidewalk from San Tomas Expressway to the west side of San Tomas Aquino Creek. The south side of Walsh Avenue has a sidewalk from San Tomas Expressway to Bowers Avenue. Walsh Avenue has sidewalks on both side of the roadway from San Tomas Expressway to Scott Boulevard.

Crosswalks with pedestrian signal heads and pushbutton actuators are present on the south, east and west approaches to the San Tomas Expressway/Walsh Avenue intersection. A crosswalk with pedestrian signal heads and pushbutton actuators is present only on the west approach to the signalized project driveway on Walsh Avenue. No crosswalks are present at the unsignalized project driveways.

Bicycle Facilities

Bicycle facilities include paths (Class I), lanes (Class II), and routes (Class III). Bicycle paths are paved trails that are separate from roadways. Bicycle lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bicycle routes are part of public roadways that are designated for bicycle use by signs only.

Figure 6 presents existing bicycle facilities in the study area. In the vicinity of the project site, Bowers Avenue/Great America Parkway has Class II bike lanes from Cabrillo Avenue to SR 237. Scott Boulevard has Class II bike lanes from Central Expressway to Arques Avenue in Sunnyvale. Los Padres Boulevard has Class II bike lanes from Pruneridge Avenue to Monroe Street. Cabrillo Avenue has Class II bike lanes from Los Padres Avenue to Lawrence Expressway. There is a Class I bike path adjacent to San Tomas Aquino Creek that extends from Scott Boulevard to Great America Parkway and Sunnyvale Baylands Park. An extension to this trail connecting to Cabrillo Avenue is slated to open in spring 2009. Bicycles are also permitted on San Tomas and Central Expressways. Bikes are allowed on the VTA Light Rail and on Caltrain. Park and Ride stations are located at the Lawrence and Santa Clara Transit Center Caltrain Stations.

4.8.1.3 Existing Transit Service

Existing transit service to the project area is provided by the VTA. The existing VTA service is shown on Figure 7.

The VTA operates several bus routes in the vicinity of the project site which are described below.

Community Route 32 operates on Monroe Street in the project area. It runs between the Santa Clara Transit Center and San Antonio Shopping Center, with 25 to 35 minute headways during the peak hours eastbound and westbound. Route 32 operates between 6:00 AM and 8:00 PM.

Local Route 57 operates on Bowers Avenue and Great America Parkway in the project area. It runs from West Valley College to Old Ironsides Light Rail Station and Great America with 30-minute headways in the AM and PM peak hours. Route 57 operates between 5:30 AM and 10:45 PM.

Local Route 58 operates on Bowers Avenue and Scott Boulevard in the project area. It runs from West Valley College to Alviso with 30 minute headways during the AM and PM peak hours. Route 58 operates between 5:45 AM and 8:00PM.

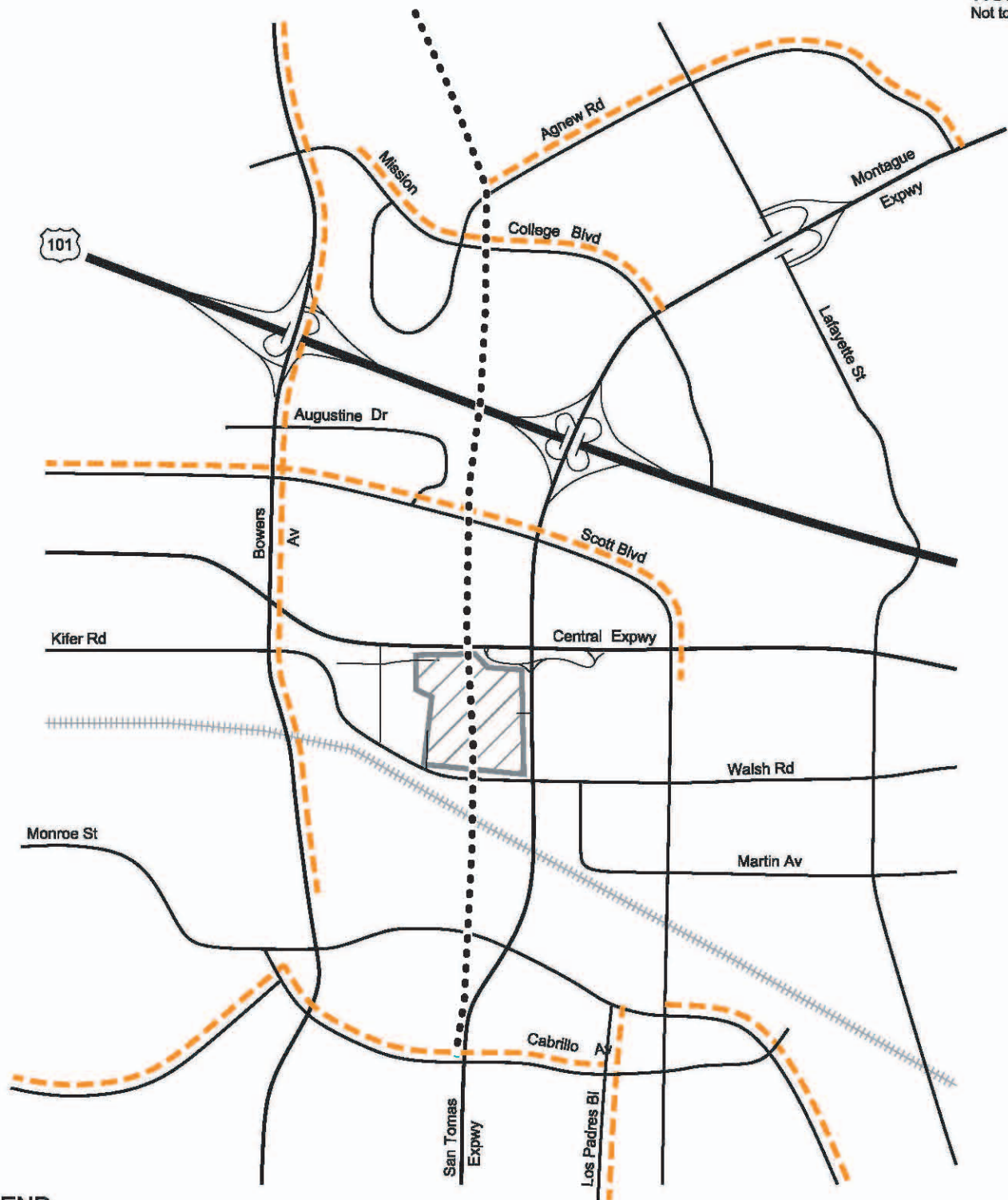
Local Route 60 operates on Winchester Boulevard, Monroe Street, and Scott Boulevard in the project area. It runs between Winchester Transit Center and Great America. Route 60 runs between 5:00 AM and 10:00 PM with 15 minute headways during the AM and PM peak hours.

Express Route 121 operates on US 101, Great America Parkway, and Tasman Drive during peak hours, with stops at Old Ironsides/Great America Light Rail Station and at all the express stops on its route in the project area. Route 121 operates between Gilroy Transit Center and the Lockheed Martin Transit Center/Moffett Park only during peak hours and with 30 to 60-minute headways. It operates northbound during the AM peak hour and southbound during the PM peak hour.

Express Route 122 operates on US 101, Great America Parkway, and Tasman Drive during peak hours, with stops at Old Ironsides/Great America Light Rail Station and at all the express stops on its



NORTH
Not to Scale



LEGEND

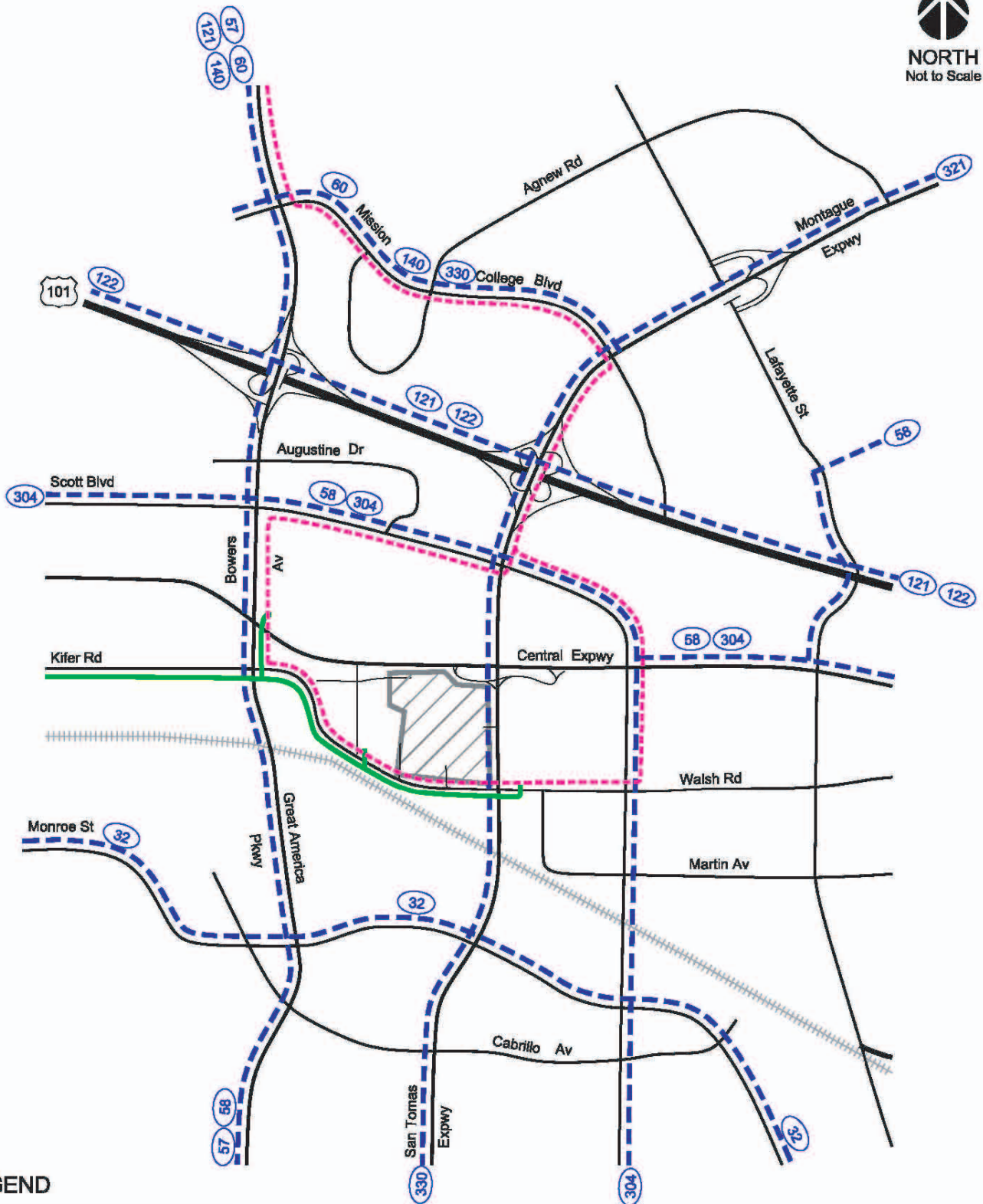
- = Bike Lane
- = Bike Path

EXISTING BICYCLE FACILITIES

FIGURE 6



NORTH
Not to Scale



LEGEND

- = Bus Route
- = Caltrain
- = Caltrain Shuttle
- = ACE Shuttle

EXISTING TRANSIT FACILITIES

FIGURE 7

route in the project area. Route 122 operates between South San Jose and the Lockheed Martin Transit Center/Moffett Park only during peak hours and with one trip each during the AM and PM peak hours. It operates northbound during the AM peak hour and southbound during the PM peak hour.

Limited Stop Route 304 operates on De La Cruz Parkway and Scott Boulevard on its route between South San Jose and the Sunnyvale Transit Center weekdays only during the peak hours with 25-45 minute headways. It operates northbound during the AM peak hours and southbound during the PM peak hours and observes all limited stops on its route in the project area.

Limited Stop Route 330 operates on San Tomas Expressway, Montague Expressway, Mission College Boulevard, Great America Parkway, and Tasman Drive on its route between Almaden Expressway and Camden and the I-880/Milpitas Light Rail Station on Tasman Drive at Alder Drive. It operates northbound with 45 to 50 minute headways during the AM peak hours and southbound with 45 to 55 minute headways during the PM peak hours. Route 330 observes all limited stops along its route in the project area. Stops for Route 330 are present in both the northbound and southbound directions of travel on San Tomas Expressway, just north of Walsh Avenue.

The study area is also served by Caltrain and by the ACE system. The Caltrain system offers service between San Francisco and Gilroy, with nearby stations including the Lawrence and Santa Clara Caltrain Stations. Limited stop trains observe stops at the Santa Clara and Lawrence Stations, with 20-45-minute headways northbound and 30-40-minute headways southbound. Caltrain operates the Bowers/Walsh Area Caltrain Shuttle, which runs on Kifer Road/Walsh Avenue between the Lawrence Caltrain Station and the Nvidia Site east of San Tomas Expressway and Walsh Avenue. The shuttle operates during the AM and PM peak hours only, with 30 to 40-minute headways during the AM peak hours and 50-60-minute headways during the PM peak hours.

The Altamont Commuter Express (ACE) operates between San Jose Diridon Station and Stockton westbound during the AM peak hours and eastbound during the PM peak hours. The Great America ACE station is located at Lafayette Street and Tasman Drive. Headways at the Great America ACE station are 45 to 65 minutes during peak hours. The 827 ACE Yellow Shuttle operates between the Great America ACE station and the project site area. The Yellow Shuttle operates southbound from the ACE station during the AM peak hours and northbound during the PM peak hours only, with one-hour headways, approximately. A stop for the ACE Yellow Shuttle is present in the westbound direction of Walsh Avenue at the eastern signalized site access driveway. Other stops for the ACE Yellow Shuttle are present at additional locations east and west of the project site along Walsh Avenue, and on Bowers Avenue, Scott Boulevard, and other locations on its route. The ACE system is operated by the San Joaquin Regional Rail Commission (SJRRRC).

4.8.1.4 Existing Intersection Operations

Methodology

Traffic conditions at the study locations were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flowing conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The correlation between average delay and level of service is shown in Table 2.

In addition to the level of service evaluation, an assessment was made for unsignalized intersections to determine if the proposed project would have an impact on any unsignalized intersections in the project vicinity.

TABLE 2 Signalized Intersection Level of Service Definitions Based on Delay		
Level of Service	Description	Average Control Delay per Vehicle¹¹
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	10.0 or less
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.0 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	Greater than 80.0

Existing Intersection Levels of Service

The Cities of Santa Clara, San José, Milpitas, and Sunnyvale consider intersection operations of LOS D or better to be acceptable. The CMP identifies LOS E or better as acceptable for regional intersections identified in the CMP

Intersections were selected for study if project traffic would add at least 10 trips per lane per hour during one or more peak hours. This is consistent with the adopted CMP methodology.

Analysis of the existing intersection operations concluded that four of the study intersections currently operate at an unacceptable LOS. These four intersections are listed below.

- De La Cruz Boulevard/Central Expressway – LOS F in the PM Peak Hour
- San Tomas Expressway/Homestead Road – LOS F in the AM Peak Hour
- San Tomas Expressway/Stevens Creek Boulevard – LOS F in the PM Peak Hour
- North First Street/Montague Expressway – LOS F in the PM Peak Hour.

All other study intersections operate at an acceptable LOS under existing conditions. The results of the existing conditions analysis are summarized in Table 3. Figure 8 shows the locations of the study intersections. Intersection operations below relevant standards are denoted in bold.

¹¹ Measured in seconds.

TABLE 3 Existing Intersection Levels of Service					
Intersection/Intersection Reference No.		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
<i>Santa Clara Intersections</i>					
1	Great America Parkway & Tasman Drive*	26.0	C	29.0	C
2	Great America Prkwy & Mission College Blvd*	38.4	D	52.2	D
3	Bowers Avenue & US 101 SB Ramps*	23.9	C	10.4	B
4	Bowers Avenue & Augustine Drive	24.1	C	32.1	C
5	Bowers Avenue & Scott Boulevard*	27.9	C	30.1	C
6	Bowers Avenue & Central Expressway*	51.5	D	53.3	D
7	Bowers Avenue & Walsh Avenue/Kiefer Road	17.7	B	20.3	C
8	Bowers Avenue & Monroe Street	29.1	C	31.8	C
9	Oakmead Parkway & Central Expressway*	21.4	C	28.5	C
10	Scott Boulevard & Central Expressway*	48.2	D	37.7	D
11	Lafayette Street & Central Expressway*	53.4	D	52.5	D
12	De La Cruz Boulevard & Central Expressway*	46.2	D	81.6	F
13	Lick Mill Boulevard & Montague Expressway	25.3	C	20.5	C
14	De La Cruz Boulevard/Agnew Road & Montague Expressway*	40	D	38.9	D
15	Mission College Boulevard & Montague Expwy*	55.5	E	37.3	D
16	San Tomas Expressway & Scott Boulevard*	32.7	C	45.3	D
17	San Tomas Expressway & Walsh Avenue	29.6	C	41.2	D
18	San Tomas Expressway & Monroe Street*	40.4	D	40.6	D
19	San Tomas Expressway & Cabrillo Avenue	43.7	D	22.2	C
20	San Tomas Expressway & El Camino Real*	56.6	E	65.6	E
21	San Tomas Expressway & Benton Street	59.9	E	31.8	C
22	San Tomas Expressway & Homestead Road*	84.0	F	69.7	E
23	Kiely Boulevard & Homestead Road	27.7	C	29.8	C
24	San Tomas Expressway & Forbes Avenue	17.3	B	12.5	B
25	San Tomas Expressway & Pruneridge Avenue	45.7	D	42.1	D
26	San Tomas Expressway & Saratoga Avenue*	57.7	E	65.7	E
27	San Tomas Expressway & Stevens Creek Blvd*	50.3	D	95.9	F
28	Saratoga Avenue & Pruneridge Avenue	19.9	B	20.7	C
29	Winchester Boulevard & Pruneridge Avenue/Hedding Street	21.7	C	25.3	C
30	Winchester Boulevard & Newhall Street	23.6	C	18.6	B
31	Saratoga Avenue & Newhall Street/Scott Boulevard	25.3	C	23.8	C
32	Scott Boulevard & Homestead Road	21.1	C	24.4	C
33	Scott Boulevard & Benton Street	18.5	B	13.8	B
34	Scott Boulevard & El Camino Real*	33.9	C	37.5	D
35	Scott Boulevard & Monroe Street	28.4	C	25.0	C
36	Scott Boulevard & Martin Avenue	17.1	B	21.9	C



STUDY INTERSECTIONS AND ROADWAY NETWORK

FIGURE 8

TABLE 3 Continued
Existing Intersection Levels of Service

Intersection/Intersection Reference No.		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
37	Scott Boulevard & Walsh Avenue	22.6	C	26.3	C
38	Lafayette Street & Walsh Avenue	16.1	B	20.1	C
39	Lafayette Street & Martin Avenue	19.1	B	19.4	B
40	Lafayette Street & Reed Street	8.1	A	16.4	B
41	Lafayette Street & El Camino Real*	43.5	D	39.1	D
42	Monroe Street & El Camino Real*	38.7	D	35.2	D
43	De La Cruz Boulevard & Reed Street	10.9	B	13.3	B
44	De La Cruz Boulevard & Martin Avenue	29.4	C	29.3	C
45	East Signalized Driveway & Walsh Avenue	8.8	A	18.2	B
46	West Site Driveway & Walsh Ave (unsignalized)	10.7	B	9.3	A
47	Northwestern Pkwy & Walsh Ave (unsignalized)	13.7	B	14.0	B
48	Northwestern Pkwy & Condensa St (unsignalized)	9.0	A	8.9	A
49	San Tomas Expressway & Site Driveway (unsignalized)	9.4	A	10.4	B
<i>San José Intersections</i>					
50	McCarthy Boulevard/O'Toole Avenue & Montague Expressway*	39.2	D	71.1	E
51	Montague Expressway & Trimble Road*	30.0	C	54.2	D
52	Montague Expressway & Plumeria Drive/River Oaks Parkway	33.5	C	40.6	D
53	Zanker Road & Montague Expressway*	48.1	D	54.6	D
54	North First Street & Montague Expressway*	61.4	E	87.9	F
55	Saratoga Avenue & Stevens Creek Boulevard*	34.1	C	38.2	D
56	Saratoga Avenue & Kiely Boulevard*	40.0	D	42.1	D
57	Saratoga Avenue & I-280 NB Ramps*	31.2	C	25.2	C
58	Saratoga Avenue & I-280 SB Ramps*	32.4	C	44.8	D
59	San Tomas Expressway & Moorpark Avenue*	46.1	D	41.4	D
An * denotes a CMP intersection					

4.8.1.5 Existing Freeway Operations

Traffic volumes for the study freeway segments were obtained from the 2006 CMP Annual Monitoring Report. The results of the analysis are summarized in Table 4 below. The results show that nine mixed-flow freeway lane segments and three HOV lane segments currently operate at LOS F¹² in at least one direction during at least one of the peak hours of traffic.

¹² For CMP freeway segments, LOS E or better is acceptable.

TABLE 4 Existing Freeway Levels of Service					
Freeway	Segment	Direction	Peak Hour	LOS Mixed-Flow	LOS HOV
US 101	Oakland Road to I-880	NB	AM PM	F C	F A
US 101	I-880 to Old Bayshore Road	NB	AM PM	F C	D A
US 101	Old Bayshore Road to N. First Street	NB	AM PM	F D	F B
US 101	N. First Street to SR 87	NB	AM PM	F B	F A
US 101	SR 87 to De La Cruz Boulevard	NB	AM PM	F D	F B
US 101	De La Cruz Boulevard to Montague Expressway/San Tomas Expressway	NB	AM PM	E E	D B
US 101	Montague Expwy/San Tomas Expwy to Bowers Ave/Great America Pkwy	NB	AM PM	D D	C A
US 101	Bowers Avenue/Great America Parkway to Lawrence Expressway	NB	AM PM	D E	C B
US 101	Lawrence Expressway to Fair Oaks Avenue	NB	AM PM	D D	C B
US 101	Fair Oaks Avenue to Mathilda Avenue	NB	AM PM	F D	D B
US 101	Mathilda Avenue to SR 237	NB	AM PM	E D	D D
US 101	SR 237 to Moffett Boulevard	NB	AM PM	F E	D D
US 101	Moffett Boulevard to SR 85	NB	AM PM	F F	F D
US 101	SR 85 to Moffett Boulevard	SB	AM PM	D D	C D
US 101	Moffett Boulevard to SR 237	SB	AM PM	C C	C C
US 101	SR 237 to Mathilda Avenue	SB	AM PM	D D	C C
US 101	Mathilda Avenue to Fair Oaks Avenue	SB	AM PM	D D	C B
US 101	Fair Oaks Avenue to Lawrence Expressway	SB	AM PM	D F	C D
US 101	Lawrence Expressway to Bowers Avenue/Great America Parkway	SB	AM PM	D F	B E
US 101	Bowers Ave/Great America Pkwy to Montague Expwy/San Tomas Expwy	SB	AM PM	C F	B F
US 101	Montague Expwy/San Tomas Expwy to De La Cruz Boulevard	SB	AM PM	D F	B D
US 101	De La Cruz Boulevard to SR 87	SB	AM PM	C F	A D
US 101	SR 87 to N. First Street	SB	AM PM	B F	A D

TABLE 4 <i>Continued</i> Existing Freeway Levels of Service					
Freeway	Segment	Direction	Peak Hour	LOS Mixed-Flow	LOS HOV
US 101	N. First Street to Old Bayshore Hwy	SB	AM PM	B F	A F
US 101	Old Bayshore Hwy to I-880	SB	AM PM	B F	A F
US 101	I-880 to Oakland Road	SB	AM PM	C F	A E
SR87	Skyport Drive to US 101	NB	AM PM	F B	B A
SR87	US 101 to Skyport Drive	SB	AM PM	C D	A B

4.8.1.6 Background Conditions

For the purposes of this analysis, it is assumed that the future near-term roadway network and intersection lane configuration under existing conditions would be same as the existing roadway network. Bicycle, transit, and pedestrian facilities under background conditions were assumed to remain unchanged from existing conditions.

Background peak-hour traffic volumes were calculated by adding estimated traffic from approved but not yet constructed development to the existing conditions. The background conditions include Phase I of the North San José Development Policy Update which includes 8,000 dwelling units, seven million square feet of industrial/office uses, and 100,000 square feet of commercial uses. For San José intersections, approved project trips from the City of San José's Approved Trip Inventory (ATI) were also included.

Background Intersection Level of Service

Analysis of the background intersection operations found that the additional traffic will contribute to unacceptable operations at the intersections identified under existing conditions as well as cause five additional intersections to operate at an unacceptable LOS. The following additional intersections would degrade to an unacceptable LOS under background conditions:

- San Tomas Expressway/Benton Street – AM Peak Hour
- San Tomas Expressway/Saratoga Avenue – PM Peak Hour
- Montague Expressway/Trimble Road – PM Peak Hour
- Zanker Road and Montague Expressway – PM Peak Hour
- McCarthy Boulevard/O'Toole Avenue and Montague Expressway – PM Peak Hour

The results of the analysis under background conditions are summarized in Table 5. Intersections operating below relevant standards are shown in bold.

TABLE 5
Background Intersection Levels of Service

Intersection/Intersection Reference No.		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
<i>Santa Clara Intersections</i>					
1	Great America Parkway & Tasman Drive*	25.6	C	29.5	C
2	Great America Prkwy & Mission College Blvd*	41.4	D	78.7	E
3	Bowers Avenue & US 101 SB Ramps*	25.2	C	10.4	B
4	Bowers Avenue & Augustine Drive	24.7	C	51.6	D
5	Bowers Avenue & Scott Boulevard*	30.7	C	32.6	C
6	Bowers Avenue & Central Expressway*	57.7	E	58.2	E
7	Bowers Avenue & Walsh Avenue/Kiefer Road	16.7	B	20.3	C
8	Bowers Avenue & Monroe Street	29.9	C	34.4	C
9	Oakmead Parkway & Central Expressway*	23.8	C	29.8	C
10	Scott Boulevard & Central Expressway*	48.1	D	39.4	D
11	Lafayette Street & Central Expressway*	54.5	D	53.8	D
12	De La Cruz Boulevard & Central Expressway*	48.1	D	86.0	F
13	Lick Mill Boulevard & Montague Expressway	24.6	C	20.0	B
14	De La Cruz Boulevard/Agnew Road & Montague Expressway*	44.0	D	40.5	D
15	Mission College Boulevard & Montague Expwy*	76.0	B	43.5	D
16	San Tomas Expressway & Scott Boulevard*	36.8	D	60.5	E
17	San Tomas Expressway & Walsh Avenue	37.3	D	45.9	D
18	San Tomas Expressway & Monroe Street*	46.9	D	43.4	D
19	San Tomas Expressway & Cabrillo Avenue	25.6	C	25.8	C
20	San Tomas Expressway & El Camino Real*	66.3	E	77.6	E
21	San Tomas Expressway & Benton Street	87.6	F	46.6	D
22	San Tomas Expressway & Homestead Road*	112.0	F	98.0	F
23	Kiely Boulevard & Homestead Road	29.0	C	32.5	C
24	San Tomas Expressway & Forbes Avenue	19.4	B	14.5	B
25	San Tomas Expressway & Pruneridge Avenue	56.0	E	49.8	D
26	San Tomas Expressway & Saratoga Avenue*	72.8	E	81.9	F
27	San Tomas Expressway & Stevens Creek Blvd*	53.7	D	115.9	F
28	Saratoga Avenue & Pruneridge Avenue	20.0	B	21.0	C
29	Winchester Boulevard & Pruneridge Avenue/Hedding Street	23.2	C	30.0	C
30	Winchester Boulevard & Newhall Street	42.2	C	20.4	C
31	Saratoga Avenue & Newhall Street/Scott Boulevard	25.8	C	23.6	C
32	Scott Boulevard & Homestead Road	21.0	C	23.4	C
33	Scott Boulevard & Benton Street	18.5	B	14.0	B
34	Scott Boulevard & El Camino Real*	34.0	C	39.1	D
35	Scott Boulevard & Monroe Street	28.7	C	25.7	C
36	Scott Boulevard & Martin Avenue	17.1	B	21.9	C
37	Scott Boulevard & Walsh Avenue	22.9	C	27.5	C
38	Lafayette Street & Walsh Avenue	16.2	B	20.9	C
39	Lafayette Street & Martin Avenue	19.3	B	19.5	B
40	Lafayette Street & Reed Street	8.3	A	16.6	B

TABLE 5 Continued					
Background Intersection Levels of Service					
Intersection/Intersection Reference No.		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
41	Lafayette Street & El Camino Real*	46.3	D	41.5	D
42	Monroe Street & El Camino Real*	38.6	D	36.5	D
43	De La Cruz Boulevard & Reed Street	11.1	B	13.7	B
44	De La Cruz Boulevard & Martin Avenue	29.2	C	29.2	C
45	East Signalized Driveway & Walsh Avenue	9.4	A	23.0	C
46	West Site Driveway & Walsh Ave (unsignalized)	11.7	B	9.7	A
47	Northwestern Pkwy & Walsh Ave (unsignalized)	15.2	C	15.6	C
48	Northwestern Pkwy & Condensa St (unsignalized)	10.0	B	9.4	A
49	San Tomas Expressway & Site Driveway (unsignalized)	9.7	A	12.4	B
<i>San José Intersections</i>					
50	McCarthy Boulevard/O'Toole Avenue & Montague Expressway*	44.4	D	146.6	F
51	Montague Expressway & Trimble Road*	32.2	C	127.5	F
52	Montague Expressway & Plumeria Drive/River Oaks Parkway	44.5	D	52.5	D
53	Zanker Road & Montague Expressway*	65.4	E	98.2	F
54	North First Street & Montague Expressway*	212.8	F	273.9	F
55	Saratoga Avenue & Stevens Creek Boulevard*	34.6	C	38.7	D
56	Saratoga Avenue & Kiely Boulevard*	37.8	D	44.3	D
57	Saratoga Avenue & I-280 NB Ramps*	30.6	C	24.5	C
58	Saratoga Avenue & I-280 SB Ramps*	32.8	C	45.0	D
59	San Tomas Expressway & Moorpark Avenue*	60.5	E	44.8	D
An * denotes a CMP intersection					

4.8.2 Traffic Impacts

4.8.2.1 Thresholds of Significance

For the purpose of this EIR, a traffic impact is considered significant if the project would:

- cause the level of service at any local intersection to degrade from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under project conditions; or
- at any local intersection that is already an unacceptable LOS E or F under background conditions, cause the critical-movement delay at the intersection to increase by four or more seconds and the demand-to-capacity ratio (V/C) to increase by .01 or more; or
- cause the level of service at a CMP or County intersection to degrade from an acceptable LOS E or better under background conditions to an unacceptable LOS F under project conditions; or
- at any CMP or County intersection that is already an unacceptable LOS F under background conditions, cause the critical-movement delay at the intersection to increase by four or more seconds and the demand-to-capacity ratio (V/C) to increase by .01 or more; or

- cause the level of service on any freeway segment to degrade from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under project conditions; or
- add more than one percent of the existing freeway capacity to any freeway segment operating at LOS F under existing conditions; or
- substantially impede the operation of a transit system as a result of congestion; or
- create an operational safety hazard.

4.8.2.2 Project Impacts

Trip Generation Rates

The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. The trip generation rates used in the City of Santa Clara are based on *Trip Generation, 7th Edition* by the *Institute of Transportation Engineers*. Based on the office/research and development rates, the project would generate 1,095 net new trips during the AM peak hour and 1,397 net new trips in the PM peak hour. The project trip generation estimates are presented in Table 6 below.

TABLE 6						
Project Trip Generation Estimates						
Use	Am Peak Hour			PM Peak Hour		
	Trips			Trips		
	In	Out	Total	In	Out	Total
Proposed Office	1,777	242	2,019	385	1,878	2,263
Existing Office	-607	-83	-690	-111	-539	-650
Existing R&D	-194	-40	-234	-32	-184	-216
Total Net New Trips	976	119	1,905	242	1,155	1,397

Intersection Level of Service Analysis

Net additional project trips, as shown in Table 6 above, were added to the background traffic volumes to determine project level LOS of the study intersections. The results of the level of service analysis show that the following 10 study intersections would operate at an unacceptable LOS under project conditions and nine of 10 intersections would be significantly impacted under project conditions.

- De La Cruz Boulevard/Central Expressway – PM Peak Hour
- San Tomas Expressway/El Camino Real – PM Peak Hour
- San Tomas Expressway/Benton Street – AM Peak Hour
- San Tomas Expressway/Homestead Road – AM and PM Peak Hour
- San Tomas Expressway/Saratoga Avenue – AM and PM Peak Hour
- San Tomas Expressway/Stevens Creek Boulevard – PM Peak Hour
- McCarthy Boulevard-O'Toole Avenue/Montague Expressway – PM Peak Hour
- Montague Expressway/Trimble Road – PM Peak Hour
- Zanker Road/Montague Expressway – PM Peak Hour
- North First Street/Montague Expressway – AM and PM Peak Hour

The remaining study intersections not identified as operating at LOS E or F (based on the relevant threshold) under existing or background conditions would operate at an acceptable LOS under

project conditions. The results of the level of service analysis under project conditions are summarized in Table 7. Impacted intersections are shown in bold print.

TABLE 7								
Project Intersection Levels of Service								
Intersections		Peak Hour	Background		Project			
			Delay	LOS	Delay	LOS	Critical Delay	Critical V/C
Santa Clara Intersections								
1	Great America Parkway & Tasman Drive*	AM	25.6	C	25.6	C	0.0	0.001
		PM	29.5	C	29.5	C	0.0	0.001
2	Great America Prkwy & Mission College Blvd*	AM	41.4	D	41.4	D	0.0	0.003
		PM	78.7	E	78.8	E	0.3	0.001
3	Bowers Avenue & US 101 SB Ramps*	AM	25.2	C	25.1	C	0.1	0.003
		PM	10.4	B	10.3	B	0.0	0.001
4	Bowers Avenue & Augustine Drive	AM	24.7	C	24.8	C	0.0	0.000
		PM	51.6	D	51.9	D	0.7	0.002
5	Bowers Avenue & Scott Boulevard*	AM	30.7	C	30.7	C	0.0	0.001
		PM	32.6	C	32.8	C	0.1	0.005
6	Bowers Avenue & Central Expressway*	AM	57.7	E	59.2	E	2.4	0.015
		PM	58.2	E	60.2	E	3.2	0.022
7	Bowers Avenue & Walsh Avenue/Kiefer Road	AM	16.7	B	17.0	B	0.2	0.017
		PM	20.3	C	21.2	C	0.3	0.005
8	Bowers Avenue & Monroe Street	AM	29.9	C	30.3	C	0.4	0.013
		PM	34.4	C	24.8	C	0.6	0.018
9	Oakmead Parkway & Central Expressway*	AM	23.8	C	23.9	C	0.1	0.005
		PM	29.8	C	30.2	C	-3.1	0.004
10	Scott Boulevard & Central Expressway*	AM	48.1	D	48.7	D	-0.1	0.002
		PM	39.4	D	39.5	D	0.0	0.020
11	Lafayette Street & Central Expressway*	AM	54.5	D	54.9	D	0.0	0.002
		PM	53.8	D	54.3	D	-0.1	0.006
12	De La Cruz Boulevard & Central Expressway*	AM	48.1	D	48.5	D	0.5	0.009
		PM	86.0	F	92.0	F	7.6	0.018
13	Lick Mill Boulevard & Montague Expressway	AM	24.6	C	24.5	C	-0.2	0.019
		PM	20.0	B	19.9	B	0.0	0.006
14	De La Cruz Boulevard/Agnew Road & Montague Expressway*	AM	44.0	D	44.1	D	-0.1	0.018
		PM	40.5	D	40.5	D	0.0	0.005
15	Mission College Boulevard & Montague Expwy*	AM	76.0	E	76.3	E	0.1	0.000
		PM	43.5	D	43.8	D	0.4	0.005
16	San Tomas Expressway & Scott Boulevard*	AM	36.8	D	36.4	D	0.1	0.005
		PM	60.5	E	61.9	E	2.4	0.012
17	San Tomas Expressway & Walsh Avenue	AM	37.3	D	43.7	D	6.7	0.041
		PM	45.9	D	59.2	E	20.5	0.171
18	San Tomas Expressway & Monroe Street*	AM	46.9	D	54.9	D	11.2	0.056
		PM	43.4	D	45.4	D	3.3	0.050.
19	San Tomas Expressway & Cabrillo Avenue	AM	25.6	C	27.1	C	2.2	0.042
		PM	25.8	C	26.5	C	1.1	0.047
20	San Tomas Expressway & El Camino Real*	AM	66.3	E	74.2	E	14.3	0.050
		PM	77.6	E	84.7	F	10.4	0.042
21	San Tomas Expressway & Benton Street	AM	87.6	F	103.1	F	21.3	0.048
		PM	46.6	D	54.7	E	16.6	0.059
22	San Tomas Expressway & Homestead Road*	AM	112.0	F	127.9	F	22.4	0.050
		PM	98.0	F	112.5	F	22.6	0.055

TABLE 7 Continued
Project Intersection Levels of Service

Intersections		Peak Hour	Background		Project			
			Delay	LOS	Delay	LOS	Critical Delay	Critical V/C
23	Kiely Boulevard & Homestead Road	AM	29.0	C	29.1	C	0.1	0.004
		PM	32.5	C	32.7	C	0.4	0.005
24	San Tomas Expressway & Forbes Avenue	AM	19.4	B	21.5	C	2.8	0.040
		PM	14.5	B	17.6	B	4.6	0.049
25	San Tomas Expressway & Pruneridge Avenue	AM	56.0	E	62.8	E	9.4	0.041
		PM	49.8	D	53.4	D	5.5	0.040
26	San Tomas Expressway & Saratoga Avenue*	AM	72.8	E	85.4	F	19.4	0.052
		PM	81.9	F	89.7	F	13.8	0.034
27	San Tomas Expressway & Stevens Creek Blvd*	AM	53.7	D	54.8	D	1.6	0.022
		PM	115.9	F	119.1	F	4.7	0.018
28	Saratoga Avenue & Pruneridge Avenue	AM	20.0	B	20.0	C	0.0	0.005
		PM	21.0	C	21.1	C	0.1	0.010
29	Winchester Boulevard & Pruneridge Avenue/Hedding Street	AM	23.2	C	23.3	C	0.0	0.008
		PM	30.0	C	30.6	C	0.9	0.017
30	Winchester Boulevard & Newhall Street	AM	24.2	C	24.2	C	0.0	0.015
		PM	20.4	C	20.6	C	0.4	0.018
31	Saratoga Avenue & Newhall Street/Scott Boulevard	AM	25.8	C	25.9	C	0.3	0.013
		PM	23.6	C	23.6	C	-0.1	0.008
32	Scott Boulevard & Homestead Road	AM	21.0	C	20.8	C	-0.2	0.012
		PM	23.4	C	23.2	C	-0.2	0.007
33	Scott Boulevard & Benton Street	AM	18.5	B	18.4	B	-0.1	0.010
		PM	14.0	B	14.1	B	0.0	0.010
34	Scott Boulevard & El Camino Real*	AM	34.0	C	34.1	C	-0.1	0.006
		PM	39.1	D	39.2	D	0.2	0.004
35	Scott Boulevard & Monroe Street	AM	28.7	C	29.3	C	0.3	0.014
		PM	25.7	C	26.2	C	0.8	0.009
36	Scott Boulevard & Martin Avenue	AM	17.1	B	17.5	B	0.0	0.010
		PM	21.9	C	22.0	C	0.0	0.006
37	Scott Boulevard & Walsh Avenue	AM	22.9	C	25.6	C	15.1	0.070
		PM	27.5	C	29.5	C	2.6	0.039
38	Lafayette Street & Walsh Avenue	AM	16.2	B	16.5	B	0.1	0.001
		PM	20.9	C	22.5	C	2.3	0.035
39	Lafayette Street & Martin Avenue	AM	19.3	B	19.8	B	0.6	0.010
		PM	19.5	B	19.7	B	0.3	0.017
40	Lafayette Street & Reed Street	AM	8.3	A	8.4	A	0.1	0.006
		PM	16.6	B	16.8	B	0.2	0.012
41	Lafayette Street & El Camino Real*	AM	46.3	D	46.7	D	0.5	0.005
		PM	41.5	D	41.7	D	0.2	0.007
42	Monroe Street & El Camino Real*	AM	38.6	D	38.7	D	0.3	0.016
		PM	36.5	D	37.3	D	1.0	0.021
43	De La Cruz Boulevard & Reed Street	AM	11.1	B	11.2	B	0.2	0.010
		PM	13.7	B	14.2	B	0.6	0.017
44	De La Cruz Boulevard & Martin Avenue	AM	29.2	C	29.3	C	-0.1	0.004
		PM	29.2	C	29.0	C	-1.7	-0.002
45	East Signalized Driveway & Walsh Avenue	AM	9.4	A	10.7	B	2.0	0.184
		PM	23.0	C	27.3	C	4.9	0.105
46	West Site Driveway & Walsh Ave (unsignalized)	AM	11.7	B	13.5	B	NA	NA
		PM	9.7	A	10.7	B	NA	NA

TABLE 7 Continued
Project Intersection Levels of Service

Intersections		Peak Hour	Background		Project			
			Delay	LOS	Delay	LOS	Critical Delay	Critical V/C
47	Northwestern Pkwy & Walsh Ave (unsignalized)	AM	15.2	C	18.4	C	NA	NA
		PM	15.6	C	21.7	C	NA	NA
48	Northwestern Pkwy & Condensa St (unsignalized)	AM	10.0	B	12.5	B	NA	NA
		PM	9.4	A	12.8	B	NA	NA
49	San Tomas Expressway & Site Driveway (unsignalized)	AM	9.7	A	10.1	B	NA	NA
		PM	12.4	B	23.8	C	NA	NA
San José Intersections								
50	McCarthy Boulevard/O'Toole Avenue & Montague Expressway*	AM	44.4	D	44.8	D	0.8	0.011
		PM	146.6	F	152.1	F	8.2	0.016
51	Montague Expressway & Trimble Road*	AM	32.2	C	32.2	C	0.2	0.004
		PM	127.5	F	132.9	F	6.9	0.018
52	Montague Expressway & Plumeria Drive/River Oaks Parkway	AM	44.5	D	44.2	D	-0.4	0.011
		PM	52.5	D	52.2	D	-0.3	0.014
53	Zanker Road & Montague Expressway*	AM	65.4	E	66.7	E	2.3	0.012
		PM	98.2	F	97.9	F	-2.3	0.007
54	North First Street & Montague Expressway*	AM	212.8	F	220.5	F	11.0	0.024
		PM	273.9	F	283.2	F	3.8	0.009
55	Saratoga Avenue & Stevens Creek Boulevard*	AM	34.6	C	34.7	C	0.3	0.014
		PM	38.7	D	38.9	D	0.3	0.017
56	Saratoga Avenue & Kiely Boulevard*	AM	37.8	D	37.7	D	0.1	0.001
		PM	44.3	D	44.7	D	0.8	0.011
57	Saratoga Avenue & I-280 NB Ramps*	AM	30.6	C	30.4	C	0.0	0.001
		PM	24.5	C	24.3	C	-0.3	0.009
58	Saratoga Avenue & I-280 SB Ramps*	AM	32.8	C	33.1	C	0.5	0.004
		PM	45.0	D	45.4	D	1.3	0.005
59	San Tomas Expressway & Moorpark Avenue*	AM	60.5	E	63.1	E	3.6	0.015
		PM	44.8	D	45.5	D	-0.1	0.003
An * denotes a CMP intersection								

Implementation of the proposed project would result in the following intersection impacts:

- De La Cruz Boulevard and Central Expressway – a 0.018 increase in V/C and a 7.6 second increase in critical delay in the PM Peak Hour exacerbating the LOS F that exists under background conditions. (CMP)
- San Tomas Expressway and El Camino Real – a 0.042 increase in V/C and a 10.4 second increase in critical delay in the PM Peak Hour resulting in the LOS degrading from E to F. (CMP)
- San Tomas Expressway/Benton Street – a 0.048 increase in V/C and a 21.3 second increase in critical delay in the AM Peak Hour exacerbating the LOS F that exists under background conditions.
- San Tomas Expressway and Homestead Road – a 0.050 increase in V/C and a 22.4 second increase in critical delay in the AM Peak Hour and a 0.055 increase in V/C and a 22.6 second

increase in critical delay in the PM Peak Hour. This would exacerbate the LOS F that exists under background conditions in both the AM and PM Peak Hour. (CMP)

- San Tomas Expressway and Saratoga Avenue – a 0.052 increase in V/C and a 19.4 second increase in critical delay in the AM Peak Hour resulting in the LOS degrading from E to F. A 0.034 increase in V/C and a 13.8 second increase in critical delay in the PM Peak Hour; exacerbating the LOS F in the PM Peak Hour. (CMP)
- San Tomas Expressway and Stevens Creek Boulevard – a 0.018 increase in V/C and a 4.7 second increase in critical delay in the PM Peak Hour exacerbating the LOS F that exists under background conditions. (CMP)
- McCarthy Boulevard/O’Toole Avenue and Montague Expressway – a 0.016 increase in V/C and an 8.2 second increase in critical delay in the PM Peak Hour exacerbating the LOS F that exists under background conditions. (CMP) (SJ)
- Montague Expressway and Trimble Road – a 0.018 increase in V/C and a 6.9 second increase in critical delay in the PM Peak Hour exacerbating the LOS F that exists under background conditions. (CMP) (SJ)
- Montague Expressway/First Street – a 0.024 increase in V/C and a 11.0 second increase in critical delay in the AM Peak Hour exacerbating the LOS F that exists under background conditions. (CMP) (SJ)

Implementation of the proposed project would have a significant impact on the nine aforementioned intersections during one or both of the peak hours. All nine intersections are either CMP or County intersections or both. In addition, four are either wholly or partially within the San José city limits. **(Significant Impact)**

Freeway Segment Analysis

Under project conditions, traffic volumes on the study freeway segments were estimated by adding the project trips to the existing traffic volumes obtained from the 2006 CMP Annual Monitoring Report. The results of the freeway analysis are summarized in Table 11 of Appendix E. The results show that the project would cause a significant increase in traffic volume (more than one percent of capacity) on eight of the study freeway segments, which are listed below.

- US 101, northbound between Old Bayshore Highway and North First Street (AM Peak Hour)
- US 101, northbound between North First Street and SR 87 (AM Peak Hour)
- US 101, northbound between SR 87 and De La Cruz Boulevard (AM Peak Hour)
- US 101, southbound between Montague Expwy and De La Cruz Boulevard (AM Peak Hour)
- US 101, southbound between De La Cruz Boulevard and SR 87 (PM Peak Hour)
- US 101, southbound between SR 87 and North First Street (PM Peak Hour)
- US 101, southbound between North First Street and Old Bayshore Highway (PM Peak Hour)
- US 101, southbound between Old Bayshore Highway and I-880 (PM Peak Hour)

The City of Santa Clara requires the payment of regional traffic fees as a condition of approval for any project impacting a regional roadway facility. The fee is set by the City at one dollar per square foot of development. There are no specific improvement programs for any of the impacted roadway

facilities identified above. As a result, while the payment of fees is required by the City there is no guarantee that the fees will be used to improve the impacted roadway segments. The fees may be used to improve other impacted regional roadway segments within the City of Santa Clara. Therefore, even with the payment of fees, the identified freeway impacts would not be reduced to a less than significant level. **(Significant Impact)**

4.8.2.3 Parking

The City of Santa Clara's standard parking rate for industrial/office space is 3.33 parking spaces per 1,000 square feet of development. With a build out of 1,950,000 square feet of office space, the project would be required to provide 6,494 parking spaces.

The project proposes a total of 7,050 parking spaces of which 6,474 spaces will be provided within the parking structures and the remaining 576 parking spaces will be in surface lots. The proposed parking on-site exceeds the City's parking requirement by 556 spaces.

In March 2008, *Hexagon Transportation Consultants* completed a parking survey of the existing NVIDIA facility for the proposed project. The parking survey found that the prospective tenant would need a parking rate of 3.63 parking spaces per 1,000 square feet to support their operations which is 0.30 spaces per 1,000 square feet more than what is required by the City. That is why the project proposes a higher number of parking spaces than is required by City code.

4.8.3 Mitigation and Avoidance Measures for Transportation Impacts

4.8.3.1 General Plan Policies

Implementation of the following General Plan Policy would reduce transportation impacts of the proposed project:

- *Transportation Demand Management Policy No. 4* states that the City should minimize the number of automobiles used in commuting.
- *Transportation Demand Management Policy No. 5* states that the City should promote increases in vehicle occupancy during commute hours and promote measures to decrease the percentage of local employees commuting alone in their automobiles.
- *Bus and Rail Systems Policy No. 6* states that the City should support a transit system that provides enhanced commuter service.
- *Sidewalks, Bikeways, and Trails Policy No. 9* states that the City should encourage the use of bicycles and walking as an alternative to driving.

4.8.3.2 Mitigation Measures

Transportation Demand Management Programs

Employment-generating development is required to develop and implement a Transportation Demand Management (TDM) program. The project proposes to include the following elements in their TDM program:

- Provide on-site physical improvements, such as sidewalk improvements, landscaping and bicycle parking that would act as incentives for pedestrian and bicycle modes of travel.
- Connect individual sites with regional bikeway/pedestrian trail system.
- Provide on-site transit information kiosk.
- Implement a carpool/vanpool program, e.g., carpool ridematching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.
- Develop a transit use incentive program for employees in the project area, such as on-site distribution of passes and/or subsidized transit passes for local transit systems.¹³
- Provide preferential parking for carpools.
- Provide a guaranteed ride home program.
- Implement a flextime policy.
- Provide on-site services such as ATMs, dry cleaning facilities, exercise room, cafeteria, etc.
- Provide or contribute to a shuttle system for employees to access local transit services within the City.¹⁴
- Provide showers and lockers for employees bicycling or walking to work.
- Provide secure and conveniently located bicycle parking and storage for workers.

Project Specific Mitigation Measures

The following mitigation measures identify roadway improvements that could reduce most of the identified intersection impacts. The feasibility of each mitigation measures is addressed below. Only those mitigation measures which are deemed feasible or include the payment of impact fees (where applicable) are proposed as part of the project to reduce the identified traffic impact.

As a condition of approval, the City of Santa Clara will collect a regional impact fee equal to one dollar per square foot of development in addition to fair share contributions for the identified intersections listed below. This is consistent with City policy to collect fees from projects that have a significant impact on regional facilities. In addition, the project proposed to pay a fair share contribution toward improvement programs currently approved and funded by the County and/or City of San José.

¹³ Examples include VTA EcoPass system and “Wageworks” which utilized pre-tax dollars to purchase transit passes.

¹⁴ Examples include the Altamont Commuter Express (ACE) Yellow Shuttle and the Lawrence Caltrain Bowers/Walsh Shuttle.

De La Cruz Boulevard and Central Expressway

- There are no feasible mitigation measures available to reduce the project impact at the identified intersection to a less than significant level. The Comprehensive County Expressway Planning Study determined that the HOV lane on Central Expressway between San Tomas Expressway and De La Cruz Boulevard would be converted to a mixed-flow lane if the HOV lane performs poorly after a three- to five-year period. It was concluded that this modification in the lane configuration would allow the intersection to operate at an acceptable LOS E. The Planning Study did not, however, specifically take into account this proposed development. Therefore, it is unknown if the change in the lane configuration would reduce the project's impacts to a less than significant level. Because no specific improvements have been identified for the impacted intersection and there is no program in place to specifically fund improvements for the impacted intersection, this impact remains significant and unavoidable.

San Tomas Expressway and El Camino Real

- The Comprehensive County Expressway Planning Study has identified the addition of a second left-turn lane on both the east and west approaches to this intersection as a Tier 1A priority. The developer will pay a fair share contribution to the City towards the County's addition of a second left-turn lane on both the east and west approaches to the San Tomas Expressway/El Camino Real intersection. Implementation of this mitigation will improve the operation of the intersection to LOS E.

San Tomas Expressway and Benton Street

- The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on the south approach as a Tier 1A priority. The developer will pay a fair share contribution to the City towards the County's addition of a fourth through lane on the south approach to the San Tomas Expressway and Benton Street intersection. The implementation of this mitigation will improve the operation of the intersection to LOS D.

San Tomas Expressway and Homestead Road

- The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on both the north and south approaches as a Tier 1A priority. The developer will pay a fair share contribution to the County towards the addition of a fourth through lane on both the north and south approaches to the San Tomas Expressway and Homestead Road intersection. The implementation of this mitigation will improve the operation of the intersection to LOS D.

San Tomas Expressway and Saratoga Avenue

- The County has determined that the addition of a second eastbound left-turn lane would improve the operation of the San Tomas Expressway and Saratoga Avenue intersection to LOS E. This improvement is already planned by the County to be implemented within one year with partial funding from the City of Santa Clara. The developer will pay a fair share contribution to the City of Santa Clara towards the addition of a second eastbound left-turn lane at the San Tomas Expressway and Saratoga Avenue intersection. The implementation of this mitigation will improve the operation of the intersection to LOS E.

San Tomas Expressway and Stevens Creek Boulevard

- The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on the north approach as a Tier 1A priority. The developer will pay a fair share contribution to the City towards the County's addition of a fourth through lane on the north approach to the San Tomas Expressway and Stevens Creek Boulevard intersection. With the identified improvement, the intersection would continue to operate at LOS F, but the average delay would be less than under background conditions.

McCarthy Boulevard/O'Toole Avenue and Montague Expressway

- The Comprehensive County Expressway Planning Study has identified the construction of a "square-loop" interchange as a Tier 1B priority. This improvement has also been identified in the North San José Deficiency Plan as a mitigation measure in Phase I, as required by the settlement agreement on the North San José EIR. The developer will pay a fair share contribution to the City of Santa Clara towards the City of San José's construction of a "square-loop" interchange at the McCarthy Boulevard/O'Toole Avenue and Montague Expressway intersection. The implementation of this mitigation will improve the operation of the intersection to LOS C.

Montague Expressway and Trimble Road

- The Comprehensive County Expressway Planning Study has identified the construction of the Trimble flyover as a replacement for the three left-turn lanes from westbound Montague Expressway to southbound Trimble Road as a Tier 1 B priority. This improvement has also been identified in the North San José Deficiency Plan as an improvement that will be implemented in Phase I. The developer will pay a fair share contribution to the City of Santa Clara towards the construction of the Trimble flyover at the Montague Expressway/Trimble Road intersection. The implementation of this mitigation will improve the operation of the intersection to LOS D.

North First Street and Montague Expressway

- The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on westbound Montague Expressway as a Tier 1A priority. This improvement has also been identified in the North San José Deficiency Plan. The capacity created by the identified improvement is anticipated to be used up by the previously approved North San José development. The addition of project traffic will exceed the capacity of the intersection, even with implementation of the identified improvement. Nevertheless, the developer will pay a fair share contribution to the City of Santa Clara towards the addition of a fourth through lane on westbound Montague Expressway. With the identified improvement, the intersection would continue to operate at LOS F and the impact would still be significant and unavoidable.

4.8.4 Conclusion

There are no feasible mitigation measures to reduce the identified impacts at the De La Cruz Boulevard/Central Expressway intersection or to fully mitigate the impact to the North First Street/Montague Expressway intersection. These intersections would still operate at LOS F which would be a significant unavoidable impact. **(Significant Unavoidable Impact)**

The Comprehensive County Expressway Planning Study identifies improvements for most of the intersections impacted by the proposed project. The fair share contribution payment by the project applicant will aid in the funding of the identified mitigation measures and will reduce the project's impacts to the following intersections a less than significant level:

San Tomas Expressway and El Camino Real
San Tomas Expressway and Benton Street
San Tomas Expressway and Homestead Road
San Tomas Expressway and Saratoga Avenue
San Tomas Expressway and Stevens Creek Boulevard
McCarthy Boulevard/O'Toole Avenue and Montague Expressway
Montague Expressway and Trimble
(Less Than Significant Impact with Mitigation)

There are no feasible mitigation measures to reduce the identified freeway segment impacts.
(Significant Unavoidable Impact)

4.9 AIR QUALITY

The information provided in this section is based on an air quality analysis prepared by *Illingworth & Rodkin* in June 2008. The complete report is provided in Appendix F.

4.9.1 Existing Setting

The amount of a given pollutant in the atmosphere is determined by the amount of pollutant released and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain and, for photochemical pollutants, sun light.

Northwest winds and northerly winds are most common in the project area, reflecting the orientation of the Bay and the San Francisco Peninsula. Winds from these directions carry pollutants released by autos and factories from upwind areas of the Peninsula toward Santa Clara, particularly during the summer months. Winds are lightest on the average in fall and winter. Every year in fall and winter there are periods of several days when winds are very light and local pollutants can build up.

Pollutants can be diluted by mixing in the atmosphere both vertically and horizontally. Vertical mixing and dilution of pollutants are often suppressed by inversion conditions, when a warm layer of air traps cooler air close to the surface. During the summer, inversions are generally elevated above ground level, but are present over 90 percent of the time in both the morning and afternoon. In winter, surface-based inversions dominate in the morning hours, but frequently dissipate by afternoon.

Topography can restrict horizontal dilution and mixing of pollutants by creating a barrier to air movement. The South Bay has significant terrain features that affect air quality. The Santa Cruz Mountains and Hayward Hills on either side of the South Bay restrict horizontal dilution, and this alignment of the terrain also channels winds from the north to south, carrying pollution from the northern Peninsula toward San José.

The combined effects of moderate ventilation, frequent inversions that restrict vertical dilution and terrain that restrict horizontal dilution give Santa Clara a relatively high atmospheric potential for pollution compared to other parts of the San Francisco Bay Air Basin and provide a high potential for transport of pollutants to the east and south.

4.9.1.1 Ambient Air Quality Standards

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. The EPA is responsible for establishing the National Ambient Air Quality Standards and enforcing the federal Clean Air Act (CAA). The CARB is responsible for meeting the requirements of the federal CAA, administering the California CAA, and establishing the California Ambient Air quality Standards. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. Table 8 identifies the major criteria pollutants, characteristics, health effects, and typical sources.

TABLE 8 Major Criteria Pollutants			
Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sun light on ozone precursors. Often called photochemical smog.	<ul style="list-style-type: none"> - Eye Irritation - Respiratory function impairment 	The major sources of ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	<ul style="list-style-type: none"> - Impairment of oxygen transport in the bloodstream - Aggravation of cardiovascular disease - Fatigue, headache, confusion, dizziness - Can be fatal in the case of very high Concentrations 	Automobile exhaust, combustion of fuels, combustion of wood in wood stoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	<ul style="list-style-type: none"> - Increased risk of acute and chronic respiratory disease 	Automobile and diesel truck exhaust, industrial processes, and fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	<ul style="list-style-type: none"> - Aggravation of chronic obstruction lung disease - Increased risk of acute and chronic respiratory disease 	Diesel vehicle exhaust, oil-powered power plants, and industrial processes.
Particulate Matter	Solid and liquid particles of dust, soot, aerosols and other matter that are small enough to remain suspended in the air for a long period of time.	<ul style="list-style-type: none"> - Aggravation of chronic disease and heart/lung disease symptoms 	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

The federal and California state ambient air quality standards are summarized in Table 9 for important pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and particulate matter (PM₁₀ and PM_{2.5}).

TABLE 9 Federal and State Ambient Air Quality Standards			
Pollutant	Averaging Time	Federal Primary Standard ¹⁵	State Standard
Ozone	1-Hour	---	0.09 PPM
	8-Hour	0.08 PPM	0.07 PPM
Carbon Dioxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual Average	0.053 PPM	0.03 PPM
	1-Hour	0.030 PPM	0.18 PPM
Sulfur Dioxide	Annual Average	0.03 PPM	---
	24-Hour	0.14 PPM	0.04 PPM
	1-Hour	----	0.25 PPM
PM ₁₀	Annual Average	----	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM _{2.5}	Annual	15 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	---
Lead	Calendar Quarter	1.5 µg/m ³	---
	30-day Average	---	1.5 µg/m ³
Sulfates	24-Hour	---	25 µg/m ³
Hydrogen Sulfide	1-Hour	---	0.03 PPM
Vinyl Chloride	24-Hour	---	0.01 PPM

The U.S. EPA established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The existing 1-hour ozone standard of 0.12 PPM or less is to be phased out and replaced by an 8-hour standard of 0.08 PPM. Implementation of the 8-hour standard was delayed by litigation, but was determined to be valid and enforceable by the U. S. Supreme Court in a decision issued in February of 2001. However, the new federal ozone standard is not yet in effect pending adoption of implementing regulations.

Suspended particulate matter (PM) is a complex mixture of tiny particles that consist of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. "Inhalable" PM consists of particles less than 10 microns in diameter, and is defined as "suspended particulate matter" or PM₁₀. Fine particles are less than 2.5 microns in diameter (PM_{2.5}). PM_{2.5}, by definition, is included in PM₁₀.

The US EPA recently adopted a new more stringent standard of 35 µg/m³ for 24-hour exposures, based on a review of the latest scientific evidence. At the same time, the EPA revoked the annual PM₁₀ standard due to a lack of scientific evidence correlating long-term exposures of ambient PM₁₀ with adverse health effects.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (such as dry cleaners). Diesel exhaust is the predominant TAC in urban air. TACs are injurious in small quantities and are

¹⁵ PPM = parts per million; µg/m³ = micrograms per cubic meter.

regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants.

4.9.1.2 Ambient Air Quality

The Bay Area Air Quality Management District (BAAQMD) monitors air quality at several locations within the San Francisco Bay Air Basin. The closest multi-pollutant monitoring station to the project site is the Jackson Street monitoring station in downtown San José. Table 10 summarizes exceedences of state and federal standards at the downtown San José monitoring site during the period 2004-2006. Table 10 shows that ozone and PM₁₀ exceed the state standards in the South Bay. Violations of the carbon monoxide standards had been recorded at the downtown San José site prior to 1992.

TABLE 10 Number of Ambient Air Quality Standards Violations and Highest Concentrations (2005 - 2007)				
Pollutant	Standard	Days Exceeding Standard		
		2005	2006	2007
Ozone	State 1-Hour	1	5	0
Ozone	State 8-Hour	1	5	0
Ozone	Federal 8-Hour	0	1	0
Carbon Monoxide	State/Federal 8-Hour	0	0	0
Nitrogen Dioxide	State 1-Hour	0	0	0
PM ₁₀	Federal 24-Hour	0	0	0
PM ₁₀	State 24-Hour	2	2	3
PM _{2.5}	Federal 24-Hour	0	6	6

Source: California Air Resources Board, Aerometric Data Analysis and Management System, 2006

Of the three pollutants known at times to exceed the state and federal standards in the project area, two are regional pollutants. Both ozone and particulate matter (PM₁₀ and PM_{2.5}) are considered regional pollutants because the concentrations are not determined by proximity to individual sources, but show a relative uniformity over a region. Thus, the data shown in Table 10 for ozone and PM₁₀ provide a good characterization of levels of these pollutants on the project site.

Carbon monoxide is considered a local pollutant because elevated concentrations are usually only found near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes.

4.9.1.3 Attainment Status and Regional Air Quality Plans

Both the Federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where federal or state ambient air quality standards are not met as “nonattainment areas.” Because of the differences between the national and state standards, the designation of “nonattainment areas” is different under the federal and state legislation.

Under the California Clean Air Act, Santa Clara County is a nonattainment area for ozone and particulate matter (PM₁₀ and PM_{2.5}). The county is either in attainment or unclassified for other pollutants.

4.9.1.4 Sensitive Receptors and Major Air Pollutant Sources

BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. These land uses include residences, schools, playgrounds, child care centers, retirement homes, convalescent homes, hospitals, and medical clinics. The project site is located within an existing industrial area. There are no sensitive receptors adjacent to or within close proximity to the project site.

4.9.2 Air Quality Impacts

4.9.2.1 *Thresholds of Significance*

For the purposes of this EIR, an air quality impact is considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan,
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative threshold for ozone precursors),
- Expose sensitive receptors to substantial pollutant concentrations, or
- Create objectionable odors affecting a substantial number of people.

*BAAQMD CEQA Guidelines*¹⁶ provide the following definitions of a significant air quality impact:

- A project contributing to carbon monoxide (CO) concentrations exceeding the State Ambient Air Quality Standard of 9 parts per million (ppm) averaged over 8 hours or 20 ppm for 1 hour would be considered to have a significant impact.
- A project that generates criteria air pollutant emissions in excess of the BAAQMD annual or daily thresholds would be considered to have a significant air quality impact. The current thresholds are 15 tons/year or 80 pounds/day for Reactive Organic Gases (ROG), Nitrogen Oxides (NO_x) or PM₁₀. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.
- Any project with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.
- Any project with the potential to expose sensitive receptors or the general public to substantial levels of toxic air contaminants would be deemed to have a significant impact.

Despite the establishment of both federal and state standards for PM_{2.5}, BAAQMD has not developed a threshold of significance for this pollutant. For this analysis, PM_{2.5} impacts would be considered significant if project emissions of PM₁₀ exceed 80 pounds per day.

The BAAQMD significance threshold for construction dust impacts is based on the degree to which the project includes appropriate construction control measures. The BAAQMD guidelines identify

¹⁶ Bay Area Air Quality Management District, *BAAQMD CEQA Guidelines*, 1996 (Revised Dec. 1999).

feasible control measures for construction emissions of PM₁₀. If the appropriate construction controls are to be implemented, then air pollutant emissions for construction activities would be considered less than significant.

4.9.2.2 Clean Air Plan

For the purposes of determining significance for a plan or revisions to a plan, BAAQMD has determined that air quality impacts would not be significant if the plan or plan revision(s) is consistent with the most recently adopted Clean Air Plan (CAP). Local plans found consistent with the CAP would have a less than significant impact on air quality. A plan or plan amendment is consistent with the CAP if: 1) population growth for the jurisdiction will not exceed the values included in the current CAP; 2) the rate of increase in vehicle miles traveled for the jurisdiction is equal to or lower than the rate of increase in population; and 3) the plan demonstrates reasonable efforts to implement those transportation control measures (TCMs) in the CAP. The current CAP, the 2005 Bay Area Ozone Strategy, was adopted by BAAQMD in January 2006.

The proposed General Plan amendment would allow an increase in industrial land use density on the project site. The project site is currently developed with 690,550 square feet of industrial/office space. Implementation of the proposed project would result in a net increase of 1,259,450 square feet of industrial/office space on an existing industrial site within close proximity to transit, regional roadways, and existing housing. Nevertheless, the substantial increase in jobs relative to available housing within the City would result in more employees commuting to work from other areas of Santa Clara County and possibility outside the County. The increase in traffic trips resulting from the proposed project would significantly increase emissions of regional pollutants (i.e., particulate matter) and be inconsistent with the CAP.

Table 11 lists the CAP TCMs that include cities as implementing agencies. Cities are not the only implementing agencies for these TCMs; other agencies include counties, BAAQMD, MTC, Congestion Management Agencies, and school districts.

The proposed General Plan amendment cannot individually implement all of the listed TCMs, but the City's General Plan does include all those that are consistent with the City's responsibility. Virtually all of these measures are already reflected in existing General Plan policies, which are the basis of mitigation for all land use impacts in Santa Clara.

TABLE 11	
CAP Transportation Control Measures to be Implemented by Cities	
Transportation Control Measures	Description
1. Expand Employee Assistance Program	<ul style="list-style-type: none"> • Provide assistance to regional and local ridesharing organizations.
9. Improve Bicycle Access and Facilities	<ul style="list-style-type: none"> • Improve and expand bicycle lane system by providing bicycle access in plans for all new road construction or modification. • Establish and maintain bicycle advisory committees in all nine Bay Area counties. • Designate a staff person as a Bicycle Program Manager. • Develop and implement comprehensive bicycle plans. • Encourage employers and developers to provide bicycle access and facilities. • Provide bicycle safety education.

<p align="center">TABLE 11 <i>Continued</i></p> <p align="center">CAP Transportation Control Measures to be Implemented by Cities</p>	
Transportation Control Measures	Description
12. Improve Arterial Traffic Management	<ul style="list-style-type: none"> • Study signal preemption for buses on arterials with high volume of bus traffic. • Improve arterials for bus operations and to encourage bicycling and walking. • Continue and expand local signal timing programs, only where air quality benefits can be demonstrated.
15. Local Clean Air Plans, Policies and Programs	<ul style="list-style-type: none"> • Incorporate air quality beneficial policies and programs into local planning and development activities, with a particular focus on subdivision, zoning and site design measures that reduce automobile trips.
17. Conduct Demonstration Projects	<ul style="list-style-type: none"> • Promote demonstration projects to develop new strategies to reduce motor vehicle emissions. Projects include: low emission vehicle (LEV) fleets and LEV refueling infrastructure.
19. Pedestrian Travel	<ul style="list-style-type: none"> • Review/revise general/specific plan policies to promote development patterns that encourage walking and circulation policies that emphasize pedestrian travel and modify zoning ordinances to include pedestrian-friendly design standards. • Include pedestrian improvements in capital improvement programs. • Designate a staff person as a Pedestrian Program Manager.
20. Promote Traffic Calming Measures	<ul style="list-style-type: none"> • Include traffic calming strategies in the transportation and land use elements of general and specific plans. • Include traffic calming strategies in capital improvement programs.

The project would increase office uses within an existing employment center that is adjacent to two major roadways (Central Expressway and San Tomas Expressway) and served by transit. The project is also adjacent to Class II bike lanes and near a Class I bike path (see Section 4.8 for a description of these bicycle facilities). While these facets of the project are consistent with some of goals of the CAP, the project will cause an increase in vehicle miles traveled because it will further exacerbate Santa Clara's jobs/housing imbalance, requiring more commuters from outside Santa Clara. **(Significant Impact)**

4.9.2.3 Project Specific Regional Impacts

Vehicle trips generated by the project would result in air pollutant emissions affecting the entire San Francisco Bay Air Basin. The incremental daily emission increase associated with project land uses is identified in Table 12 for Reactive Organic Gases (ROG) and Nitrogen Oxides (NOx) which are two precursors of ozone, and PM.

TABLE 12 Daily Project Emissions in Pounds Per Day				
Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
Proposed Project (without trip reduction)	134	144	183	35
Existing on-site uses	-60	-68	-88	-35
Net Increase in Emissions	74	76	95	18
BAAQMD Thresholds	80	80	80	----

Based on the transportation impact analysis (TIA) for the proposed project, a reduction in trips is assumed based on the sites proximity for transit and the implementation of TDM programs. Table 13 below shows the net increase in emissions with the assumed trip reductions.

TABLE 13 Daily Project Emissions in Pounds Per Day With Trip Reduction Measures				
Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
Net Increase in Emissions (see Table 12)	74	76	95	18
Net Decrease in Emissions with Reduction for TDM and Transit	8	13	11	2
Net Increased Emissions Over Existing Uses	66	53	84	16
BAAQMD Thresholds	80	80	80	----

Even with trip reduction credit for transit use and the implementation of TDM measures, the proposed project emissions shown in Table 13 would exceed the thresholds of significance identified for PM₁₀. BAAQMD has not established thresholds for PM_{2.5} at this time; however, PM₁₀ emissions include PM_{2.5}. Implementation of the proposed project would result in an increase in daily regional PM emissions that would exceed established thresholds. **(Significant Impact)**

4.9.2.4 Local Impacts

The project would increase traffic on the local street network, changing carbon monoxide levels along roadways used by project traffic. Carbon monoxide is an odorless, colorless poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of this gas are highest near intersections of major roads.

Carbon monoxide concentrations under worst-case meteorological conditions have been predicted for several signalized intersections affected by the project. The highest measured level of carbon monoxide over any eight-hour averaging period during the last three years is 3.4 ppm. The contribution of project generated traffic to these levels was predicted using the EMFAC2007 model developed by the California Air Resources Board. Table 14 shows the results of the carbon monoxide analysis for the 8-hour traffic periods in ppm at congested intersections that would be impacted by project traffic.

TABLE 14 Roadside Carbon Monoxide Concentrations in Parts Per Million			
Intersection	Existing 2008	Background 2010	Project 2010
Montague Expressway and North First Street	7.1	7.7	7.8
Montague Expressway and O'Toole Avenue	7.0	7.3	7.4
San Tomas Expressway and El Camino Real	6.9	6.4	6.7
Central Expressway and Bowers Avenue	6.6	6.1	6.3
BAAAQMD Thresholds	9.0 PPM		

Table 14 shows that existing predicted carbon monoxide concentrations near the study intersections meet the 8-hour standard. Concentrations with background traffic would increase by as much as 0.6 ppm above existing levels at two intersections and decrease by as much as 0.5 ppm at the remaining intersections. Traffic from the proposed project would increase concentrations by up to 0.3 ppm but concentrations would remain below the most stringent state or federal standards. Since project traffic would not cause any new violations of the 8-hour standards for carbon monoxide, nor contribute substantially to an existing or projected violation, project impacts on local carbon monoxide concentrations will be less than significant.

Implementation of the proposed project would not result in carbon monoxide concentrations above established state or federal standards. **(Less Than Significant Impact)**

4.9.2.5 Construction-Related Impacts

The proposed project would require excavation and grading of the site as well as concrete crushing and building demolition. Excavation of soil has a high potential for creating air pollutants. In addition to the dust created during excavation, substantial dust emissions could be created as concrete is demolished and debris and soil is loaded into trucks for disposal.

After excavation and demolition, construction dust would continue to affect local air quality during construction of the project. Construction activities would generate exhaust emissions from vehicles/equipment and fugitive particulate matter emissions that would affect local air quality. Construction activities are also a source of organic gas emissions. Solvents in adhesives, non-waterbase paints, thinners, some insulating materials and caulking materials would evaporate into the atmosphere and would participate in the photochemical reaction that creates urban ozone. Asphalt used in paving is also a source of organic gases for a short time after its application.

During construction, various diesel-powered vehicles and equipment would be in use on the site. In 1998 the California Air Resources Board identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). The California Air Resources Board has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.¹⁷ High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstop) were identified as having the highest associated risk.

Health risks from Toxic Air Contaminants are a function of both concentration and duration of exposure. Unlike the above types of sources, construction diesel emissions are temporary, affecting

¹⁷ California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

an area for a period of days or perhaps weeks. Additionally, construction related sources are mobile and transient in nature, and the bulk of the emission occurs within the project site at a substantial distance from nearby receptors. Because of its short duration, the transient nature of emissions, and the distance of sensitive receptors from the site, health risks from construction emissions of diesel particulate would be a less than significant impact.

According to the *BAAQMD CEQA Guidelines*, emissions of ozone precursors (ROG and NO_x) and carbon monoxide from construction equipment are already included in the emission inventory that is the basis for regional air quality plans, and thus are not expected to impede attainment or maintenance of ozone and carbon monoxide standards in the Bay Area. Thus, the effects of construction activities would be increased dustfall and locally elevated levels of particulate matter (PM₁₀ and PM_{2.5}) downwind of construction activity, which will be a significant impact.

Construction of the proposed project would result in short-term air quality impacts associated with dust and particulate generation. **(Significant Temporary Impact)**

4.9.3 Mitigation and Avoidance Measures for Air Quality Impacts

4.9.3.1 General Plan Policies

The following General Plan Policy would reduce temporary construction related air quality impacts of the proposed project to a less than significant level:

- *Air Quality Policy 19* states that the City will protect the air quality of the City of Santa Clara and its sphere of influence and promote land use and transportation policies which maintain air quality.

4.9.3.2 Mitigation Measures

Transportation Demand Management Programs

Employment-generating development is required to develop and implement a Transportation Demand Management (TDM) program. The project proposed to include the following elements in the TDM program:

- Provide physical improvements, such as sidewalk improvements, landscaping and bicycle parking that would act as incentives for pedestrian and bicycle modes of travel.
- Connect individual sites with regional bikeway/pedestrian trail system.
- Provide on-site transit information kiosk.
- Implement a carpool/vanpool program, e.g., carpool ridematching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.
- Develop a transit use incentive program for employees in the project area, such as on-site distribution of passes and/or subsidized transit passes for local transit systems.¹⁸

¹⁸ Examples include VTA EcoPass system and “Wageworks” which utilized pre-tax dollars to purchase transit passes.

- Provide preferential parking for carpools.
- Provide a guaranteed ride home program.
- Implement a flextime policy.
- Provide on-site services such as ATMs, dry cleaning facilities, exercise room, cafeteria, etc.
- Provide or contribute to a shuttle system for employees to access local transit services within the City.¹⁹
- Provide showers and lockers for employees bicycling or walking to work.
- Provide secure and conveniently located bicycle parking and storage for workers.

Construction Impacts

The following mitigation measures are proposed as part of the project to avoid or reduce significant construction related air quality impacts:

- The following dust control measures will be implemented during all construction phases:
 - Water all active construction areas at least twice daily and more often during windy periods.
 - Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
 - Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
 - Sweep daily (preferably with water sweepers) all paved access roads on-site, parking areas and staging areas at construction sites.
 - Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets.
 - Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
 - Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
 - Limit traffic speeds on unpaved roads to 15 mph.
 - Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
 - Replant vegetation in disturbed areas as quickly as possible.

4.9.4 Conclusion

No mitigation has been identified that would reduce the identified regional air quality impact to a less than significant level. While the proposed project will incorporate “Green Building” designs (see Section 2.0) and TDM measures to the extent feasible, the proposed project will have a significant impact on regional PM₁₀ concentrations. **(Significant Unavoidable Impact)**

¹⁹ Examples include the Altamont Commuter Express (ACE) Yellow Shuttle and the Lawrence Caltrain Bowers/Walsh Shuttle.

The proposed project will have a less than significant impact on all other local and regional pollutants including carbon dioxide. **(Less Than Significant Impact)**

Implementation of General Plan policies and the proposed mitigation measures would reduce temporary air quality impacts resulting from construction activities to a less than significant level. **(Less Than Significant with Mitigation)**

4.10 NOISE

4.10.1 Existing Setting

4.10.1.1 Fundamental Concepts of Environmental Acoustics

Noise is defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its loudness. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1 of Appendix F.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 15 of Appendix F. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq} . The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

In determining the daily level of environmental noise, it is important to account for the difference in responses of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Since the sensitivity to noise increases during the evening and at night, mainly because excessive noise interferes with the ability to sleep, 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, CNEL*, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 pm - 10:00 pm) and a 10 dB addition to nocturnal (10:00 pm - 7:00 am) noise levels. The *Day/Night Average Sound Level, Ldn*, is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

4.10.1.2 Regulatory Background – Noise

The State of California and the City of Santa Clara have established guidelines, regulations, and policies designed to limit noise exposure at noise sensitive land uses. Appendix E of the State CEQA Guidelines, the State of California Building Code, and the City of Santa Clara's Noise Element of the General Plan present the following applicable criteria:

State CEQA Guidelines. The California Environmental Quality Act (CEQA) contains guidelines to evaluate the significance of effects resulting from a proposed project. These guidelines have been used in this EIR as thresholds for establishing potentially significant noise impacts and are listed under *Thresholds of Significance*.

CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 DNL or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard (60 DNL). Where noise levels would remain below the normally acceptable noise level standard with the project, noise level increases of 5 DNL or greater would be considered significant.

City of Santa Clara General Plan. In the Noise Element of the City of Santa Clara General Plan Figure 5-G shows the noise levels considered consistent with specific land uses. For industrial office uses, outdoor noise levels of up to 70 decibels are considered acceptable and up to 80 decibels are conditionally acceptable²⁰.

4.10.1.3 Existing Noise Environment

The project site is located at the southwest corner of the Central Expressway/San Tomas Expressway intersection, south of Highway 101 in the City of Santa Clara. The site is bounded by industrial/office development to the west, Walsh Avenue to the south, San Tomas Expressway to the east, and Central Expressway to the north. There is industrial/office development on the east side of San Tomas Expressway, the north side of Central Expressway, and the south side of Walsh Avenue. The existing noise environment is created primarily by vehicular traffic from the two expressways, Highway 101, and aircraft associated with the nearby Norman Y. Mineta San José International Airport. Based on noise contours in the General Plan (Figure 5-I), the project site is outside the Airport Land Use Commissions (ALUC) identified 65 decibel boundary and the 65 decibel traffic noise contour.

4.10.2 Noise Impacts

4.10.2.1 Thresholds of Significance

For the purposes of this EIR, a noise or vibration impact is considered significant if the project would:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or

²⁰ Conditionally acceptable allows new construction or development to be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features are included in the design.

- Expose persons to, or generate excessive groundborne vibration or groundborne noise levels; or
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; or
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

4.10.2.2 Noise Impacts to the Project Site

Based on available data, it is estimated that future office occupants will be exposed to exterior noise levels of 65 decibels. The exterior noise environment at the project site will not exceed 70 dBA, which is consistent with the City's "normally acceptable" noise level standard for office/industrial land uses. **(Less Than Significant)**

4.10.2.3 Project-Generated Traffic Noise Impacts

Based upon a review of the traffic study prepared by *Hexagon Transportation Consultants* (see Section 4.8, *Transportation and Circulation*), traffic noise levels would increase as a result of the project and other assumed growth in the project area. Project traffic would result in traffic noise increases but would not double the amount of traffic on Central Expressway or San Tomas Expressway and, therefore, will not noticeably increase the ambient noise level of the project area. A noise increase is considered substantial if it increases the ambient noise level by three decibels or more in sensitive noise areas. There are, however, no existing noise-sensitive land uses along these roadways and the project would not noticeably increase noise levels. Future project traffic will, therefore, result in a less than significant noise impact. **(Less Than Significant)**

4.10.2.4 Construction Impacts

Construction activities associated with implementation of the proposed project would temporarily increase noise levels in the project area. Construction activities generate considerable amounts of noise, especially during the construction of project infrastructure when heavy equipment is used. Typical average construction generated noise levels are about 81 – 89 decibels measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.) Construction generated noise levels drop off at a rate of about six decibels per doubling of distance between the source and receptor.

The construction of the proposed project would temporarily increase noise levels in the immediate vicinity of the project site, but would not be audible at noise sensitive locations. The nearest noise sensitive location (i.e., residential land uses) is located more than 1,080 feet (approximately 0.20 miles) south of the project site, immediately south of the Caltrain rail line. Compliance with City code requirements for construction such as time limits and standard noise suppression techniques will ensure that construction of the proposed project would have a less than significant noise impact. **(Less Than Significant Impact)**

4.10.3 Mitigation and Avoidance Measures for Noise Impacts

No mitigation is required or proposed.

4.10.4 Conclusion

Implementation of the proposed project will result in a less than significant noise impact. **(Less Than Significant Impact)**

4.11 UTILITIES

The following analysis is based in part on a Water Supply Assessment and a Sanitary Sewer Capacity Assessment prepared by the City of Santa Clara, and a Sanitary Sewer Modeling Report (west parcel only) completed by RMC. These reports can be found in Appendices G, H, and I respectively of this EIR.

4.11.1 Existing Setting

4.11.1.1 Water Service

Water service to the site is provided by the City of Santa Clara Water Utility. The Santa Clara Water Utility has a plant capacity of 80 million gallons per day (mgd) and produces an average of 24 mgd. The Water System consists of more than 330 miles of water mains, 27 wells and seven storage tanks with more than 27 million gallons of water capacity. Drinking water is provided by an extensive underground aquifer (access by the City's wells) and by two wholesale water importers: the Santa Clara Valley Water District (SCVWD) (imported from the Sacramento-San Joaquin Delta) and the San Francisco Hetch-Hetchy System (imported from the Sierra Nevada Mountains). About 35 percent of the City's water comes from these imported treated water supplies. The remaining 65 percent is pumped from the City's system of 27 deep wells. The three sources are used interchangeably or are blended together. A water recharge program administered by SCVWD from local reservoirs and imported water enhances the dependability of the underground aquifer.

For the eastern portion of the project site, there is currently a 12-inch water line located in Walsh Avenue. For the western portion of the project site, there is currently a 12-inch water line located in Condensa Street. The current water use on-site is approximately 21,783 gallons per day (gpd).

Recycled Water

The nearest recycled water supply line is on the north side of US 101 at the location of the existing Yahoo campus on Great America Parkway. The project does not propose to extend the line to serve the project site.

4.11.1.2 Sanitary Sewer/Wastewater Treatment

Background

Wastewater from the City of Santa Clara is treated at the San Jose/Santa Clara Water Pollution Control Plant (WPCP), located near Alviso. The WPCP is a regional wastewater treatment facility serving eight tributary sewage collection agencies and is administered and operated by the City of San José's Department of Environmental Services. The WPCP provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 163 million gallons of wastewater a day (mgd).²¹

The WPCP is currently operating under a 120 million gallon per day dry weather effluent flow constraint. This requirement is based upon the State Water Resources Control Board and the Regional Water Quality Control Board concerns over the effects of additional freshwater discharges from the WPCP on the saltwater marsh habitat, and pollutant loading to the Bay from the WPCP.

²¹ City of San Jose Website.

Approximately ten percent of the plant's effluent is recycled for non-potable uses and the remainder flows into San Francisco Bay.

Based on 1989 flow measurements and more current 2007 hydraulic modeling data,²² the large interceptor mains and pump stations that convey Santa Clara's wastewater to the treatment plant have adequate capacity for existing wastewater flow. Based on hydraulic modeling of the system, however, several sewer mains and collector lines are at or near capacity. Implementation of projects currently under review and consistent with the existing General Plan would exceed the capacity of the existing system. These capacity deficiencies are based on the estimated increases in sanitary sewer flows resulting from the cumulative development and redevelopment projects (which will increase densities in mixed-use and transit-oriented areas) that are consistent with and included as part of the projected growth under the current General Plan. The majority of the capacity issues are projected to occur on the western side of the City along the trunk line in Great America Parkway and Bowers Avenue and extending upstream into the smaller trunk lines in Chromite Drive, Machado Avenue, Calabazas Boulevard, and El Camino Real. The deficiencies are also attributable to the City's commitment to provide a defined volume of conveyance capacity for the City of Cupertino, based upon a contractual agreement entered into when the City of Santa Clara purchased an existing sewer trunk line from the Cupertino Sanitation District several years ago. Capacity deficiencies have also been predicted in the southeast portion of the City in Scott Boulevard and Park Avenue.

New development projects that result in a net increase in wastewater flow to the capacity-deficient areas of the sanitary sewer system may be required to contribute to improvements to the system. The hydraulic modeling study completed by the City in 2007 includes recommended solutions for the identified capacity issues. These solutions have been used to estimate capital improvement costs, which can be factored into the City's Capital Improvement Program and associated fee structure.

The evaluation of impacts upon the smaller collector mains will continue to depend on the location and type of development. Sewer mains near or adjacent to other large undeveloped or redevelopable parcels may have adequate capacity to accommodate most types of development on those sites; however, the type of development can radically impact reserve capacity within the conveyance system. It is a City requirement that new industrial, commercial, and major residential development be reviewed to determine projected wastewater load and available sewer capacity before zoning approval or permits are approved. To the extent that additional sewer collection system improvements may be identified, such improvements will become the responsibility, in whole or in part, of the project applicants.

Project Conditions

The eastern portion of the project site is currently served by three sanitary sewer lines (12-inch, 15-inch, and 21-inch) located along the southern edge of the site. The western portion of the project site is currently served by a 12-inch sanitary sewer line located near the northwest corner of the parcel.

4.11.1.3 Storm Drainage System

The City of Santa Clara owns and maintains the municipal storm drainage system which serves the project site. The lines that serve the project site drain into San Tomas Aquino Creek. San Tomas Aquino Creek flows into the Guadalupe Slough which flows north, carrying the runoff from the

²² *Sanitary Sewer Capacity Assessment Draft Report*, RMC Water and Environment, May 2007.

storm drains into San Francisco Bay. There is no overland release of stormwater directly into any water body from the project site.

The eastern portion of the project site drains into a 24-inch line located in Walsh Avenue and into a 42-inch line along the northern edge of the eastern portion of the project site. These lines discharge into San Tomas Aquino Creek. The western portion of the project site drains into a 48-inch line along the southern edge and into a 54-inch line along the northern edge of the western portion of the project site.

4.11.1.4 Solid Waste

Solid waste collection in the City of Santa Clara is provided by Mission Trail Waste System through a contract with the City. Mission Trail Waste Systems also has a contract to implement the Clean Green portion of the City's recycling plan by collecting yard waste. The City has an arrangement with the owners of the Newby Island Landfill, located in San Jose, to provide disposal capacity for the City of Santa Clara through 2019. Recycling services are provided through Stevens Creek Disposal and Recycling. The City of Santa Clara is working to meet the waste diversion goal of 50 percent set by state law for all jurisdictions to be met by 2000.

According to the California Integrated Waste Management Board's web site, preliminary information identified a diversion rate of between 41 and 45 percent for the City of Santa Clara.

4.11.2 Utilities Impacts

4.11.2.1 Thresholds of Significance

For the purposes of this EIR, a utility and service impact is considered significant if the project would:

- Require or result in the construction of new stormwater or wastewater facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Need new or expanded entitlements for water supplies;
- Be served by a landfill with insufficient permitted capacity; or
- Would not comply with federal, state, and local statutes and regulations related to solid waste.

4.11.2.2 Water Impacts

Implementation of the proposed project would result in a net increase in water usage on-site of 309,662 gallons per day. The City of Santa Clara has determined that the level of development proposed on the project site and the projected increase in water demand is consistent with the growth projections and future water demand assumed in the preparation and analysis of the City's 2005 Urban Water Management Plan (UWMP). The City's 2005 UWMP concluded that sufficient water supplies are available to meet the projected demands. As such, the City will be able to supply sufficient water to the project site.

4.11.2.3 Sanitary Sewer/Wastewater Impacts

In July 2008, the existing sanitary sewer lines that serve the project site were modeled by the City to determine if there was sufficient capacity for the proposed development. Based on the model results, it was determined that under peak wet weather flow conditions, there would be a slight surcharging in some downstream trunk lines with the project's anticipated flow. Even with the slight surcharging in some downstream trunk lines, the increase in development on the site would not trigger new capacity improvements in the existing sanitary sewer system. The project, however, is proposing to connect to a new line in Walsh Avenue that is already proposed to be constructed by the City.²³ This new connection would require the abandonment of the on-site portion of the existing line and substantial modifications to the existing infrastructure. The new connection would have the benefit of moving the existing line from within the property boundary to within an existing public right-of-way. As a condition of approval, the project will be required to pay a fair share fee toward the upsizing of the proposed Walsh Avenue line.

The new connection will be of adequate size to support the new development and will not interfere with the existing service to other properties. As a result, the proposed project would have a less than significant impact on the sanitary sewer system.

4.11.2.4 Storm Drainage Impacts

The City's existing municipal storm drainage system will serve the new development. With implementation of the proposed project, the amount of impervious surfaces on the site will be reduced by approximately seven percent resulting in less stormwater entering the storm drainage system. The existing storm drainage system has sufficient capacity to accommodate the existing runoff from the project site. With the decrease in impermeable surfaces, runoff from the project site will not exceed the capacity of the storm drain system, will not cause flooding, and will have a less than significant impact on the storm drainage system.

4.11.2.5 Solid Waste Impacts

Implementation of the proposed project will result in an increase in solid waste and recyclable materials generated within the City of Santa Clara of approximately 1,149 tons per year. The Newby Island Landfill, located in San Jose, has an agreement with the City to provide disposal capacity through 2019. The project will comply with the requirements of the Santa Clara Business/Commercial Recycling Program to assist the City to meet its waste diversion goal of 50 percent. Increased recycling will extend the useful life of the landfill. New landfill facilities will not need to be contracted with or constructed to service the proposed project.

4.11.3 Mitigation and Avoidance Measures for Utilities Impacts

No mitigation is required or proposed.

4.11.4 Conclusion

The proposed project will have a less than significant utilities impact. **(Less Than Significant Impact)**

²³ A map of the proposed improvements can be found at the back of Appendix H.

4.12 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126.4 (a)(1)(c) and Appendix F which requires that EIRs should include a discussion of the potential energy impacts of proposed projects with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

4.12.1 Introduction

Energy consumption is analyzed in an EIR because of the environmental impacts associated with its production and usage. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases.

Energy usage is typically quantified using the British Thermal Unit (BTU).²⁴ As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWhr) of electricity are 123,000 BTUs, 1,000 BTUs, and 3,400 BTUs, respectively.

Energy conservation is embodied in many federal, state and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, Title 24 of the California Administrative Code sets forth energy standards for buildings, rebates/tax credits are provided for installation of renewable energy systems, and the Flex Your Power program promotes conservation in multiple areas. The City of Santa Clara currently has a policy (Public Facilities & Services Element Policy No. 7) in place that promotes energy conservation through the continued development of an innovative energy program to develop cost effective new power sources and encourage conservation.

4.12.2 Existing Setting

Total energy usage in California was 8,519 trillion BTU's in the year 2000, which equates to an average of 252 million BTU's per capita. Of California's total energy usage in 2000, the breakdown by sector was 18 percent residential, 19 percent commercial, 22 percent industrial, and 41 percent transportation. This energy was supplied in the form of petroleum (46 percent), natural gas (29.5 percent), renewable sources (9.0 percent), coal (8.0 percent), nuclear electric power (5.0 percent), and hydroelectric power (2.5 percent)²⁵.

Given the nature of the proposed project, the remainder of this discussion will focus on the three most relevant sources of energy: electricity for office/industrial uses, natural gas for office/industrial uses, and gasoline for vehicle trips associated office/industrial uses.

4.12.2.1 Electricity and Natural Gas

Electricity is provided in Santa Clara by the City's own public utility and natural gas is provided by Pacific Gas & Electric. The state of California currently requires that energy saving measures be applied to new construction through the California Building Standards Code.

²⁴The British Thermal Unit (Btu) is the amount of energy that is required to raise the temperature of one pound of water by one degree Fahrenheit.

²⁵ California Energy Commission. 2007 Integrated Energy Policy Report.

Electricity

Energy consumption in California grew from 250,241 gigawatt hours (GWh) in 2001 to 270,927 GWh in 2004²⁶. Statewide annual peak demand is expected to grow, on average, 1.35 percent annually, to reach approximately 325,000 GWh in 2017²⁷.

California relies heavily on imported electricity from both the Southwest and the Pacific Northwest. By 2016, California utilities will need to procure approximately 24,000 megawatts (MW) of peak resources to replace expiring contracts, retiring power plants, and meet peak demand growth. This amount would maintain a 15 to 17 percent reserve margin²⁸.

Electricity usage in California for differing land uses varies substantially by the type of uses in a building, the type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. The average annual usage of electricity is roughly 18 kWhr/square foot for office buildings.

Electricity supply in California involves a complex grid of power plants and transmission lines located in the Western United States, Canada, and Mexico. The issue is complicated by market forces that have become prominent since 1998, which is when a new regulatory environment commonly referred to as "deregulation" took effect in California. Supply is further complicated by the fact that the peak demand for electricity is significantly higher than the off-peak demand. For example, in August 2004, peak electric demand - due in large part to hot weather - reached a record high of 44,497 megawatts, which is almost double the lowest demand period.²⁹ The California ISO continued to deal with record electricity usage in the summer of 2006. Three new peak electricity usage records were set the week of July 17 to July 25, 2006, including a peak demand of 50,538 MW.³⁰

In 2000-2001, electric demand exceeded supply on various occasions, which required utilities to institute systematic rotating outages to maintain the stability of the grid and to prevent widespread blackouts. Since that time, additional generating capacity has come on-line and upgrades to various transmission lines continue to occur.

According to the California Energy Commission's 2007 *Integrated Energy Policy Report*, population growth in California is expected to occur at a higher rate in the hotter, drier inland areas as more people move there, which will increase peak demand but also change the pattern of energy use. For example, inland areas during the summer months will require more air conditioning than coastal areas which will increase peak demand more than overall demand. As a result, energy efficiency and demand response will become even more important³¹.

The proposed project would replace 10 existing two-story office/industrial buildings and one four-story office building with three new eight-story office buildings and three six- to eight-story parking garages. It would also include the removal of existing electric utility underground substructures,

²⁶ One gigawatt = one thousand megawatts = one million kilowatts = one billion watts

²⁷ California Energy Commission. 2007 Integrated Energy Policy Report.

²⁸ California Energy Commission. 2005 Integrated Energy Policy Report.

²⁹ Source: California Independent System Operator, 8/11/04.

³⁰ California Independent System Operator. 26 July 2006. <http://www.caiso.com/183e/183ebd4414ad0.pdf>

³¹ Californian Energy Commission. 2007 Integrated Energy Policy Report.

cables, equipments, pad-mount transformers, switches, and associated facilities on-site. Demolition of the existing buildings and surface parking and construction of the proposed project would be completed in several phases. The electrical distribution system will be disrupted once demolition and construction activities commence. Relocation of the electric facilities in conflict with the demolition activities on-site and installation of new underground electric substructures, cables, switches, and associated electrical facilities away from the construction activities would provide the means necessary to maintain the distribution system and continue to supply electricity to the project site during all phases of construction.

Natural Gas

In 2006, natural gas was used to produce electricity (44 percent), in industrial uses (23 percent), in commercial uses (10 percent), and in residential uses (22 percent), and for transportation (less than one percent). California imports 85 percent of its natural gas supplies from other states and Canada. California's natural gas supplies are increasingly threatened by declining production in the United States and growing demand in neighboring states.³²

Natural gas usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all gas-consuming devices within a building. The average annual usage of natural gas is roughly 29 cubic feet/square foot for office buildings.

As California strives to reduce greenhouse gas emissions, natural gas sources and use will depend on new technologies (e.g., hybrid vehicles, solar heating) and methods of supply (e.g., liquefied natural gas shipped by tanker, biogas). These developments will depend on and influence natural gas supplies and contribute to the uncertainty in past and future projections.³³

4.12.2.2 Gasoline for Motor Vehicles

Annually California consumed an estimated 16 billion gallons of gasoline and 4.0 billion gallons of diesel. This represents a 50 percent increase over the amount that was used 20 years ago. The primary factors contributing to this increase are 1) population growth and more on-road vehicles, 2) low per-mile cost of gasoline for the past two decades, 3) lack of alternatives to conventional gasoline and diesel fuels, 4) consumer preferences for larger, less fuel efficient motor vehicles, and 5) land-use planning that places jobs and housing farther apart without transportation integration.³⁴ Although gasoline consumption is expected to increase in California by one to two percent each year, Californians used approximately 63 million gallons less gasoline in 2007 than they did in 2006.³⁵

The average fuel economy for the fleet of light-duty vehicles (autos, pickups, vans, and SUVs) steadily increased from about 12.6 miles-per-gallon (mpg) in the mid-1970s to approximately 20.7 mpg in 1985 as a result of federal standards which have not substantially changed in 22 years. In December 2007, the Energy Independence and Security Act of 2007 was signed which mandates a national fuel economy standard of 35 miles per gallon by 2020.

³² California Energy Commission. 2007 Integrated Energy Policy Report.

³³ California Energy Commission. 2007 Integrated Energy Policy Report.

³⁴ California Energy Commission. 2005 Integrated Energy Policy Report.

³⁵ California Energy Commission. 2007 Integrated Energy Policy Report.

Although no new refineries have been constructed in California since 1969, supply has kept pace with demand through a combination of refinery upgrades/modernizations and out-of-state imports.

Imports of foreign crude oil will increase as in-state and Alaskan supplies diminish. Since California refineries are already operating close to their full capacity, daily imports of refined gasoline and diesel are expected to double over the next 20 years. Unless out-of-state facilities expand, the gasoline and diesel markets will become increasingly volatile, with the likelihood of shortages and more prolonged periods of high prices.

4.12.3 Energy Impacts

4.12.3.1 Thresholds of Significance

For this project, an energy impact is considered significant if the project would result in:

- the wasteful use of fuel or energy; or
- a substantial increase in demand upon energy resources in relation to projected supplies; or
- longer overall distances between jobs and housing.

At full occupancy, the existing buildings on-site would use approximately 12.4 million kilowatt hours of electricity and 68.3 million cubic feet of natural gas per year³⁶. The new buildings proposed by the project would consume approximately 22.7 million kilowatt hours of electricity and 124.6 million cubic feet of natural gas. This would result in a net increase of 10.3 million kilowatt hours of electricity per year and 56.3 million cubic feet of natural gas per year for the entire site. This would be a substantial increase in demand upon energy resources in relation to projected supplies.

(Significant Impact)

The proposed project would increase jobs in an existing job center in Santa Clara close to transit and within a short distance to housing. Therefore, the proposed project would not result in longer overall distances between jobs and housing. **(Less than Significant Impact)**

4.12.4 Mitigation and Avoidance Measures for Energy Impacts

The measures to reduce energy consumption listed below would mitigate the energy impacts of the proposed project to a less than significant level. Unless determined by the City Council to be infeasible, these measures will be required as conditions of approval. In the event the mitigation is determined to be infeasible, adoption of a statement of overriding considerations will be required as part of the approved action.

- The project shall be certified in accordance with the Leadership in Energy and Environmental Design (LEED) requirements, a nationally acceptable benchmark for the design, construction, and operation of high performance green buildings. The level of LEED certification will be at the discretion of the project applicant.
- The project shall exceed Title 24 energy requirements by 10 percent to the satisfaction of the Director of Electric Utility.

³⁶ Based upon the following average usage factors for industrial/office land uses: 18 kilowatt hours per square foot per year for electricity and 29 cubic feet per square foot per year for natural gas.

- The project shall include reflective, *EnergyStar*™ cool roofs. Cool roofs decrease roofing maintenance and replacement costs, improve building comfort, reduce impact on surrounding air temperatures, reduce peak electricity demand, and reduce waste stream of roofing debris.
- The project shall utilize local and regional building materials in order to reduce energy consumption associated with transporting materials over long distances.
- The project shall utilize building products that contain post-consumer recycled materials.
- The project shall include photovoltaic (i.e., solar electric) systems on rooftops where feasible to the satisfaction of the Director of Electric Utility.

4.12.5 Conclusion

The proposed project would be infill development and would comply with existing state and federal regulations regarding the energy efficiency of buildings, appliances, lighting, etc. Therefore, the proposed project will not result in the wasteful use of energy. Mitigation measures would reduce the demand for new energy resources in relation to projected supplies to a less than significant level.
(Less Than Significant With Mitigation)

Unlike utility services, public facility services are provided to the community as a whole, usually from a central location or from a defined set of nodes. The resource base for delivery of the services, including the physical service delivery mechanisms, is financed on a community-wide basis, usually from a unified or integrated financial system. The service delivery agency can be a city, county, service or other special district. Typically, new development will create an incremental increase in the demand for these services; the amount of demand will vary widely, depending on both the nature of the development (residential vs. commercial, for instance) and the type of services, as well as on the specific characteristics of the development (such as senior housing vs. family housing).

The impact of a particular project on public facilities services is generally a fiscal impact. By increasing the demand for a type of service, a project could cause an eventual increase in the cost of providing the service (more personnel hours to patrol an area, additional fire equipment needed to service a tall building, etc.). That is a fiscal impact, however, not an environmental one.

CEQA does not require an analysis of fiscal impacts. CEQA analysis is required if the increased demand triggers the need for a new facility (such as a school or fire station), since the new facility would have a physical impact on the environment.

For the purposes of the EIR, a public facilities and services impact is considered significant if the project would result in substantial adverse physical impacts associated with the provision or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.

5.1 Police Services

Police protection services are provided in this area by the City of Santa Clara Police Department (SCPD). The SCPD has approximately 151 sworn officers and 50 support personnel. Police headquarters is located on El Camino Real east of the project site.

The proposed industrial development would increase the total population of Santa Clara during standard business hours, but would not permanently increase the population because no housing is proposed as part of the project. The project would be constructed in conformance with current codes and the project design will be reviewed by the City of Santa Clara Police Department to ensure that it incorporates appropriate safety features to minimize criminal activity.

New facilities would not be required to provide adequate police services to serve the proposed project.

5.2 Fire Services

Fire protection services are provided to the project site by the City of Santa Clara Fire Department (SCFD). The SCFD is comprised of approximately 180 fire service personnel and more than 60 volunteers. The SCFD receives an average of 8,500 emergency calls per year, including hazardous materials, emergency medical, specialized rescue, and fires. The goal of the SCFD is to maintain a

force sufficiently staffed and deployed to sustain a three-minute response time to initial calls 90-95 percent of the time.³⁷

The SCFD consists of ten stations distributed throughout the City. The closest station to the project site is Station 2, located at 1900 Walsh Avenue, which is approximately 0.41 miles east of the project site.

The existing condition on the site creates a demand for fire services because the site is currently occupied. The proposed project would result in a net increase in the total square footage of industrial/office building space on the site, resulting in an increase in demand for fire protection services. The proposed project will be built to current Fire Code standards, including sprinklers and smoke detectors, and include features that would reduce potential fire hazards. Access to the site for emergency vehicles will be provided from project driveways, built to Fire Department specifications.

Although the proposed project would incrementally increase demand for fire response and related emergency services, it will not require the development of new fire service facilities, and therefore, will not result in a significant physical impact on the environment.

5.3 Schools

The proposed project is the redevelopment of an existing industrial/office park and does not propose any new residential uses. No new students would be directly generated by the implementation of the proposed project. Therefore, the proposed project will not have any impact on schools in the City of Santa Clara.

5.4 Parks

The City of Santa Clara General Plan states that neighborhood parks and recreational centers are of great importance to the City. The City currently maintains 38 municipal parks and playgrounds, including a wildlife and natural vegetation park, a dog park, and a skate park. Neighborhood parks typically range in size from one acre to 10 acres. The City's recreational system is augmented by local school facilities, which are available to the general public after normal school hours.³⁸

The nearest City park is Bracher Park (a 3.5-acre park), located on Bowers Avenue just south of the Caltrain railroad tracks less than 0.25 miles from the project site (as the crow flies). This park contains a large turf play area, basketball courts, and picnic-barbecue facilities.

The proposed project is the redevelopment of an industrial/office complex and does not include any residential uses. A net increase in the daily employee population in the City would not result in a substantial increase in usage of local recreational facilities. In addition, the project proposes approximately 10 acres of passive open space for site users. Therefore, the proposed project will not impact existing recreational facilities in the City.

5.4 Libraries

The Santa Clara County Library System consists of eight libraries and one bookmobile. The Santa Clara County Libraries are governed by the Joint Powers Authority, which is comprised of one City

³⁷ Clark Custodio, Deputy Chief, City of Santa Clara Fire Department.

³⁸ City of Santa Clara, *City of Santa Clara General Plan 2000 – 2010, 2002*.

Council member from each of the eight member City jurisdictions and two members from the Santa Clara County Board of Supervisors. Property taxes pay for more than half the cost of operating the Library. In addition to the property tax, property within the district is also assessed for enhanced service through a County Service Area.

The City is served by two libraries, the Central Park Library located at 2635 Homestead Road, and the Mission Library Family Reading Center located at 1098 Lexington Street. The Central Park Library includes group study rooms, large community rooms, public art, more than 100 public computers, high speed Internet connection for personal laptops, a computer training facility, a café and bookstore, a renowned genealogy and local history collection, a children's garden, fireplaces, and an extensive collection of materials for educational and recreational use. The Mission Library contains an extensive collection of reading materials and is headquarters for READ Santa Clara, a free adult literacy program.

The proposed project is the expansion of an existing industrial/office park and does not include any residential uses. Therefore, the proposed project will not have any impact on library facilities in the City of Santa Clara.

5.6 Conclusion

Implementation of the proposed project would result in an increase in industrial office space within the City which would incrementally increase the demand for police and fire protection services in the project area. This increased demand, however, will be offset through existing laws and ordinances and will not result in the need to construct new police, or fire facilities. Due to the nature of the proposed development, the project will not impact existing school, recreational, or library facilities. **(Less Than Significant Impact)**

SECTION 6.0

CUMULATIVE IMPACTS

Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, are considerable or which compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant projects taking place over a period of time. The CEQA Guidelines state (§15130) that an EIR should discuss cumulative impacts “when the project’s incremental effect is cumulatively considerable.” The discussion does not need to be in as great detail as is necessary for project impacts, but is to be “guided by the standards of practicality and reasonableness.” The purpose of the cumulative analysis is to allow decision makers to better understand the potential impacts which might result from approval of past, present and reasonably foreseeable future projects, in conjunction with the proposed project.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence. The effects of “past projects” are generally reflected in the existing conditions described in the specific sections of this EIR. “Present projects” are those approved but not yet developed. For instance, traffic from recently approved but not yet constructed and/or occupied projects is reflected in the background conditions scenario described in Section 4.8, *Transportation and Traffic*.

In order to meet the intent of the cumulative analysis requirement, the following discussion reflects the information known to the City of Santa Clara as of the date of circulation of this EIR. The relevant projects are listed in Table 15 below.

TABLE 15			
Recently Approved and Reasonably Foreseeable Projects			
Name	Type	Size	Status
Intel SC-12b Regency	Office	Existing industrial redeveloped to 100,000 square feet of office	Approved
Intel SC-14	Office	Existing industrial redeveloped to 400,000 square feet office	Approved
Applied Materials	R&D	Existing industrial redeveloped to 840,000 square feet R&D	Approved
Agilent Technologies	Office/R&D	Existing industrial redeveloped to 727,500 square feet office/R&D	Approved
Cognac Great America	Office/R&D	Existing office redeveloped to 278,000 square feet office/R&D	Approved
Yerba Buena/Irvine	Office	Undeveloped site developed to 911,000 square feet of office	Approved
Shea/UL Site	Residential	Existing industrial redeveloped with 132 housing units	Approved

TABLE 15 <i>Continued</i> Recently Approved and Reasonably Foreseeable Projects			
Name	Type	Size	Status
North San José Phase I	Mixed	8,841 residential units 147,000 sf commercial 1,488,609 sf industrial/office	Approved
Kaiser Hospital	Medical	130,000 square feet of medical offices	Approved
BAREC	Residential	165 Apartment Units	Approved
Sobrato – Lawson Lane	Office	516,000 square feet of office	Approved
Valley Fair	Commercial	678,000 sf expansion of existing shopping center	Approved
Santa Clara SC – IV Data Center	Office	312,000 sf data center	Approved
Prometheus	Residential	124 Apartment Units	Approved
Marina Playa	Residential	Existing office redeveloped to 277 apartment units and 63 single-family houses	Approved
2585 El Camino Real	Mixed-Use	60 dwelling units and 3,300 square feet retail	Pending
North San José Phase II	Mixed	1,500,000 sf R&D/office 5,353 residential units	Pending
Santa Clara Square	Mixed-Use	Existing shopping center redeveloped to 490 dwelling units and 171,000 sf retail	In Process
Regency Plaza	Office/Retail	Existing industrial redeveloped to 300,000 sf of office use and 6,000 sf retail	In Process
EOP Augustine at Bowers	Office/Retail	Existing industrial redeveloped to 1,969,500 sf feet office and 35,000 sf retail	In Process
Lowe Enterprises	Office	Existing light industrial to 215,000 sf of office	In Process
Hotel Le Grande	Hotel	Existing hotel expanded to 170-room hotel/condominium	In Process
Sobrato – Great America	Office	600,000 square feet office	In Process
Pelio Investments	Office	350,000 sf data center	In Process
Swim Center at Central Park	Recreational	2 Olympic-sized pools/ special event venue	In Process
San Francisco 49ers Stadium	Recreational	68,500 seat outdoor stadium	In Process

6.1 Cumulative Impacts

For each subject area, the discussions below address the following aspects of cumulative impacts:

- Would the effects of the proposed project, when combined with the effects of all past, present, and pending development result in a cumulatively significant impact on the resources in question?
- If a cumulative impact is likely to be significant, would the contribution of the proposed project to that impact be cumulatively considerable?

Based on the analysis in this EIR, the proposed project would not contribute to a cumulative cultural resources, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials, visual and aesthetics, noise, utilities and service systems (i.e., stormdrains, sanitary sewer, and solid waste), public services, or energy. This is because the project would not contribute substantially to a significant cumulative impact in any of those resources areas. Therefore, the proposed project would not make a cumulatively considerable contribution to a cumulative impact.

Development of the project site with other pending and approved development may have cumulatively significant impacts in the following areas:

- Land Use
- Transportation
- Air Quality
- Global Climate Change

6.1.1 Cumulative Land Use Impacts

As discussed in Section 4.1.2.7, the City of Santa Clara has a strong employment base with approximately 2.22 jobs per employed resident. The proposed project would construct approximately 1,259,450 square feet of net new industrial office space and replace 690,550 square feet of existing office space for an existing high-tech company already occupying office space in Santa Clara. Other pending projects would add approximately 3,000,000 additional square feet of new office development in the City of Santa Clara. These projects would create additional job opportunities within the City and significantly increase the jobs/housing imbalance in the City.

Because Santa Clara already has a strong employment base, new workers would either have to commute from housing in other areas of Santa Clara County or from outside the County. This could induce substantial housing growth in other areas.

6.1.1.1 Conclusion

Implementation of the pending office projects would significantly increase the City's jobs/housing imbalance, increase the number of workers commuting from outside the City, and induce housing growth throughout the region. As a result, the project will contribute to a significant and unavoidable land use impact. **(Significant Unavoidable Cumulative Impact)**

6.1.2 Cumulative Transportation Impacts

Cumulative transportation impacts were analyzed by applying an annual growth rate of 1.2 percent³⁹ to existing traffic volumes and then adding the trips from approved development, estimated project trips, and trips from pending projects. The cumulative condition also included trips from Phases 1 and 2 of the North San José Development Policy.

The proposed project will have a cumulative impact on 18 intersections. The results of the LOS analysis under cumulative conditions are summarized in Table 16 below.

TABLE 16 Cumulative Condition Intersection Levels of Service									
Intersection/Intersection Reference No.		Background				Cumulative Condition			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
<i>Santa Clara Intersections</i>									
1	Great America Parkway & Tasman Drive*	33.5	C	38.1	D	35.3	D	39.7	D
2	Great America Prkwy & Mission College Blvd*	56.1	E	136.5	F	59.6	E	163.4	F
3	Bowers Avenue & US 101 SB Ramps*	22.1	C	8.9	A	23.6	C	8.8	A
4	Bowers Avenue & Augustine Drive	24.7	C	51.6	D	89.9	F	160.7	F
5	Bowers Avenue & Scott Boulevard*	39.9	D	40.1	D	48.6	D	52.0	D
6	Bowers Avenue & Central Expressway*	57.6	E	57.5	E	79.8	E	72.5	E
7	Bowers Avenue & Walsh Avenue/Kiefer Road	16.8	B	20.3	C	17.2	B	21.6	C
8	Bowers Avenue & Monroe Street	29.6	C	34.1	C	31.1	C	40.2	D
9	Oakmead Parkway & Central Expressway*	24.7	C	28.3	C	27.3	C	31.6	C
10	Scott Boulevard & Central Expressway*	47.7	D	39.3	D	50.6	D	43.6	D
11	Lafayette Street & Central Expressway*	53.6	D	53.5	D	57.4	E	58.2	E
12	De La Cruz Boulevard & Central Expressway*	47.7	D	85.1	F	52.0	D	108.1	F
13	Lick Mill Boulevard & Montague Expressway	25.0	C	20.5	C	25.1	C	20.5	C
14	De La Cruz Boulevard/Agnew Road & Montague Expressway*	44.0	D	40.6	D	53.5	D	46.7	D

³⁹ The CMA Guidelines provide for use of either a 1.2 percent growth rate per year or a list of proposed future projects. By using both, this analysis is conservative, in that it shows more growth than the CMA Guidelines require.

TABLE 16 Continued Cumulative Condition Intersection Levels of Service									
Intersection/Intersection Reference No.		Background				Cumulative Condition			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
15	Mission College Boulevard & Montague Expwy*	75.9	E	43.3	D	110.1	F	72.5	E
16	San Tomas Expressway & Scott Boulevard*	37.4	D	51.4	D	43.0	D	86.0	F
17	San Tomas Expressway & Walsh Avenue	37.1	D	46.1	D	48.9	D	63.8	E
18	San Tomas Expressway & Monroe Street*	46.3	D	43.1	D	69.6	E	53.8	D
19	San Tomas Expressway & Cabrillo Avenue	25.3	C	25.4	C	29.7	C	28.3	C
20	San Tomas Expressway & El Camino Real*	63.6	E	73.5	E	91.8	F	97.4	F
21	San Tomas Expressway & Benton Street	80.2	F	43.1	D	125.3	F	78.2	E
22	San Tomas Expressway & Homestead Road*	103.8	F	87.1	F	146.9	F	131.6	F
23	Kiely Boulevard & Homestead Road	28.0	C	31.7	C	30.8	C	33.5	C
24	San Tomas Expressway & Forbes Avenue	18.8	B	14.0	B	26.7	C	24.9	C
25	San Tomas Expressway & Pruneridge Avenue	53.7	D	47.7	D	73.2	E	61.4	E
26	San Tomas Expressway & Saratoga Avenue*	70.6	E	77.6	E	104.4	F	104.1	F
27	San Tomas Expressway & Stevens Creek Blvd*	53.5	D	114.7	F	57.3	E	133.9	F
28	Saratoga Avenue & Pruneridge Avenue	20.0	B	23.1	C	20.1	C	23.3	C
29	Winchester Boulevard & Pruneridge Avenue/Hedding Street	23.0	C	38.0	D	23.2	C	38.8	D
30	Winchester Boulevard & Newhall Street	24.1	C	20.4	C	24.6	C	20.8	C
31	Saratoga Avenue & Newhall Street/Scott Boulevard	25.7	C	23.4	C	26.1	C	23.5	C
32	Scott Boulevard & Homestead Road	20.9	C	23.2	C	21.2	C	23.7	C
33	Scott Boulevard & Benton Street	18.5	B	14.0	B	18.6	B	14.3	B
34	Scott Boulevard & El Camino Real*	42.4	D	46.5	D	42.5	D	47.8	D

TABLE 16 Continued Cumulative Condition Intersection Levels of Service									
Intersection/Intersection Reference No.		Background				Cumulative Condition			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
35	Scott Boulevard & Monroe Street	28.7	C	25.7	C	29.3	C	26.5	C
36	Scott Boulevard & Martin Avenue	17.2	B	21.9	C	17.5	B	22.2	C
37	Scott Boulevard & Walsh Avenue	23.0	C	27.5	C	25.8	C	30.0	C
38	Lafayette Street & Walsh Avenue	16.3	B	20.8	C	17.0	B	23.3	C
39	Lafayette Street & Martin Avenue	19.4	B	19.5	B	20.2	C	20.1	C
40	Lafayette Street & Reed Street	8.2	A	16.5	B	8.6	A	17.1	B
41	Lafayette Street & El Camino Real*	49.6	D	45.2	D	56.6	E	50.6	D
42	Monroe Street & El Camino Real*	38.8	D	34.9	C	39.2	D	35.7	D
43	De La Cruz Boulevard & Reed Street	11.1	B	14.2	B	11.6	B	16.3	B
44	De La Cruz Boulevard & Martin Avenue	29.2	C	23.2	C	29.4	C	24.6	C
45	East Signalized Driveway & Walsh Avenue	8.5	A	23.1	C	9.6	A	27.4	C
46	West Site Driveway & Walsh Ave (unsignalized)	11.7	B	9.7	A	13.6	B	10.8	B
47	Northwestern Pkwy & Walsh Ave (unsignalized)	15.2	C	15.6	C	18.8	C	22.6	C
48	Northwestern Pkwy & Condensa St (unsignalized)	10.0	B	9.4	A	12.6	B	12.8	B
49	San Tomas Expressway & Site Driveway (unsignalized)	9.6	A	12.2	B	10.1	B	26.7	D
<i>San José Intersections</i>									
50	McCarthy Boulevard/O'Toole Avenue & Montague Expressway*	43.9	D	132.0	F	84.0	F	228.0	F
51	Montague Expressway & Trimble Road*	32.2	C	121.2	F	41.5	D	226.0	F
52	Montague Expressway & Plumeria Drive/River Oaks Parkway	45.9	D	54.1	D	56.8	E	62.5	E
53	Zanker Road & Montague Expressway*	64.2	E	103.5	F	104.5	F	184.2	F

TABLE 16 Continued									
Cumulative Condition Intersection Levels of Service									
Intersection/Intersection Reference No.		Background				Cumulative Condition			
		AM Peak		PM Peak		AM Peak		PM Peak	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
54	North First Street & Montague Expressway*	206.2	F	315.2	F	274.5	F	415.4	F
55	Saratoga Avenue & Stevens Creek Boulevard*	34.5	C	40.0	D	35.0	D	41.4	D
56	Saratoga Avenue & Kiely Boulevard*	37.9	D	44.2	D	38.7	D	46.2	D
57	Saratoga Avenue & I-280 NB Ramps*	29.6	C	24.6	C	29.5	C	24.2	C
58	Saratoga Avenue & I-280 SB Ramps*	31.6	C	45.1	D	34.4	C	48.0	D
59	San Tomas Expressway & Moorpark Avenue*	54.6	D	42.9	D	63.2	E	46.2	D

Based on the impact criteria listed in Section 4.8, implementation of the proposed project along with other approved, pending, and reasonably foreseeable projects would result in the following cumulative intersection impacts:

Santa Clara Intersections

- Impact CTR-1:** Great America Parkway and Mission College Boulevard – The additional traffic would exacerbate the LOS F under background conditions with a 0.107 increase in V/C and a 45.7 second increase in critical delay.
- Impact CTR-2:** Bowers Avenue and Augustine Drive – The additional traffic will degrade the LOS C in the AM Peak Hour and LOS D in the PM Peak Hour under background conditions to LOS F in the AM and PM Peak Hour. A 0.478 increase in V/C and a 119.2 second increase in critical delay will occur in the AM Peak Hour and a 0.459 increase in V/C and a 154.0 second increase in critical delay will occur in the PM Peak Hour
- Impact CTR-3:** De LA Cruz Boulevard and Central Expressway – The additional traffic would exacerbate the LOS F under background conditions with a 0.081 increase in V/C and a 30.3 second increase in critical delay.
- Impact CTR-4:** Mission College Boulevard and Montague Expressway – The additional traffic will degrade the LOS E under background conditions to LOS F with a 0.213 increase in V/C and a 83.6 second increase in critical delay in the AM Peak Hour.
- Impact CTR-5:** San Tomas Expressway and Scott Boulevard – The additional traffic will degrade the LOS D under background conditions to LOS F with a 0.191 increase in V/C and a 52.5 second increase in critical delay in the PM Peak Hour.

- Impact CTR-6:** San Tomas Expressway and El Camino Real – The additional traffic will degrade the LOS E in the AM and PM Peak Hour under background conditions to LOS F in the AM and PM Peak Hour. A 0.152 increase in V/C and a 50.5 second increase in critical delay will occur in the AM Peak Hour and a 0.140 increase in V/C and a 43.7 second increase in critical delay will occur in the PM Peak Hour
- Impact CTR-7:** San Tomas and Benton Street – The additional traffic will exacerbate the LOS F in the AM Peak Hour under background conditions and degrade the LOS D in the PM Peak Hour under background conditions to LOS E. A 0.143 increase in V/C and a 62.4 second increase in critical delay will occur in the AM Peak Hour and a 0.159 increase in V/C and a 53.9 second increase in critical delay will occur in the PM Peak Hour
- Impact CTR-8:** San Tomas Expressway and Homestead Road – The additional traffic will exacerbate the LOS F in the AM and PM Peak Hour under background conditions. A 0.141 increase in V/C and a 60.8 second increase in critical delay will occur in the AM Peak Hour and a 0.162 increase in V/C and a 65.3 second increase in critical delay will occur in the PM Peak Hour.
- Impact CTR-9:** San Tomas Expressway and Saratoga Avenue – The additional traffic will degrade the LOS E in the AM and PM Peak Hour under background conditions to LOS F. A 0.140 increase in V/C and a 53.8 second increase in critical delay will occur in the AM Peak Hour and a 0.108 increase in V/C and a 45.5 second increase in critical delay will occur in the PM Peak Hour.
- Impact CTR-10:** San Tomas Expressway and Stevens Creek Boulevard – The additional traffic will exacerbate the LOS F under background conditions in the PM Peak Hour with a 0.087 increase in V/C and a 30.3 second increase in critical delay.

San José Intersections

- Impact CTR-11:** McCarthy Boulevard/O'Toole Avenue and Montague Expressway – The additional traffic will degrade the LOS D in the AM Peak Hour under background conditions to LOS F and exacerbate the LOS F in the PM Peak Hour under background conditions. A 0.226 increase in V/C and a 61.3 second increase in critical delay will occur in the AM Peak Hour and a 0.321 increase in V/C and a 146.6 second increase in critical delay will occur in the PM Peak Hour
- Impact CTR-12:** Montague Expressway and Trimble Road – The additional traffic will exacerbate the LOS F in the PM Peak Hour under background conditions with a 0.321 increase in V/C and a 130.0 second increase in critical delay will occur in the PM Peak Hour.
- Impact CTR-13:** Zanker Road/Montague Expressway – The additional traffic will degrade the LOS E in the AM Peak Hour under background conditions to LOS F and exacerbate the LOS F in the PM Peak Hour under background conditions. A 0.220 increase in V/C and a 70.3 second increase in critical delay will occur in the AM Peak Hour and a 0.363 increase in V/C and a 107.9 increase in critical delay will occur in the PM Peak Hour.

Impact CTR-14: First Street/Montague Expressway – The additional traffic will exacerbate the LOS F in the AM and PM Peak Hour under background conditions. A 0.230 increase in V/C and a 103.1 second increase in critical delay will occur in the AM Peak Hour and a 0.260 increase in V/C and a 115.6 second increase in critical delay will occur in the PM Peak Hour.

6.1.2.1 Mitigation Measures for Cumulative Traffic Impacts

There is no process in place to mitigate for the cumulative impacts identified in this EIR. In addition, it is somewhat speculative to assume that all the identified projects would be approved and developed within a defined timeframe. Therefore, mitigation measures identified below are for informational purposes only. CEQA Guidelines acknowledges that mitigation for cumulative impacts may only be achieved through an ordinance or program. It is likely that a regional mechanism such as a Countywide Deficiency Plan could mitigate these multi-jurisdictional cumulative impacts. As such, the payment of impact fees has been identified as a form of mitigation for cumulative impacts to intersections that are part of an adopted improvement program

Santa Clara Intersections

MM CTR-1: Great America Parkway and Mission College Boulevard – The identified impact would be mitigated to a less than significant level with the addition of a third westbound left-turn lane. The City of Santa Clara plans to implement this improvement and requires a one percent fair share contribution on all projects that contribute to the identified impact. With the proposed improvement, the intersection will still operate at LOS F but the average delay would be less than under background conditions.

MM CTR-2: Bowers Avenue and Augustine Drive – The identified impact would be partially mitigated with the addition of a second southbound left-turn lane. This improvement has been identified as part of the proposed redevelopment of a property adjacent to the intersection. With this improvement, the intersection would operate at an acceptable level (LOS D) in the AM Peak Hour. The intersection would continue to operate at LOS F in the PM Peak Hour. To fully mitigate the identified impact, the acquisition of additional right-of-way would be required and is, therefore, considered infeasible. The proposed project may be required to pay a fair share contribution toward the identified improvement.

MM CTR-3: De La Cruz Boulevard and Central Expressway – There are no feasible mitigation measures available to reduce the project impact at the identified intersection to a less than significant level. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facility improvements within the City of Santa Clara. The County may or may not use these funds for improvements to the identified intersection.

- MM CTR-4:** Mission College Boulevard and Montague Expressway – The Comprehensive County Expressway Planning Study has identified the addition of a third left-turn lane on eastbound Montague Expressway to northbound Mission College Boulevard as a Tier 2 priority. This improvement would be accomplished by the reconfiguration of the existing lanes, but would not improve the LOS of the intersection (LOS F) in the AM Peak Hour. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.
- MM CTR-5:** San Tomas Expressway and Scott Boulevard – The Comprehensive County Expressway Planning Study has identified the addition of a second right-turn lane to the east approach as a Tier 1C priority. The implementation of this mitigation will improve the operation of the intersection to LOS E. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.
- MM CTR-6:** San Tomas Expressway and El Camino Real – The Comprehensive County Expressway Planning Study has identified the addition of a second left-turn lane to both the east and west approaches as a Tier 1A priority. The implementation of this mitigation will improve the operation of the intersection to LOS E in the AM Peak Hour but the intersection would continue to operate at LOS F in the PM Peak Hour. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.
- MM CTR-7:** San Tomas Expressway and Benton Street – The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on the south approach as a Tier 1A priority. The implementation of this mitigation will improve the operation of the intersection to LOS D. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.
- MM CTR-8:** San Tomas Expressway and Homestead Road – The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on both the north and south approaches as a Tier 1A priority. The implementation of this mitigation will improve the operation of the intersection to LOS D. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.

- MM CTR-9:** San Tomas Expressway and Saratoga Avenue – The County has determined that the addition of a second eastbound left-turn lane would improve the operation of the San Tomas Expressway and Saratoga Avenue intersection to LOS E. This improvement is already planned by the County with partial funding from the City of Santa Clara. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.
- MM CTR-10:** San Tomas Expressway and Stevens Creek Boulevard – The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on the north approach as a Tier 1A priority. With the identified improvement, the intersection would continue to operate at LOS F, but the average delay would be less than under background conditions. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.
- MM CTR-11:** McCarthy Boulevard/O’Toole Avenue and Montague Expressway – The Comprehensive County Expressway Planning Study has identified the construction of a “square-loop” interchange as a Tier 1B priority. This improvement has also been identified in the North San José Deficiency Plan. The developer will pay a fair share contribution towards the construction of a “square-loop” interchange at the McCarthy Boulevard/O’Toole Avenue and Montague Expressway intersection.
- MM CTR-12:** Montague Expressway and Trimble Road – The Comprehensive County Expressway Planning Study has identified the construction of the Trimble “flyover” as a Tier 1B priority. This improvement has also been identified in the North San José Deficiency Plan. The flyover would replace the triple left-turn lanes from westbound Montague Expressway to southbound Trimble Road. The developer will pay a fair share contribution towards the construction of the Trimble “flyover” at the Montague Expressway and Trimble Road intersection.
- MM CTR-13:** Zanker Road and Montague Expressway – The identified impact would be partially mitigated with the addition of a second left-turn lane on the north and south Zanker Road approaches. The City of San José has identified this improvement as part of the Zanker Road widening project. The mitigation would reduce the average delay for vehicular traffic, but the intersection would continue to operate at LOS F with average delays greater than that under background conditions. There are no other feasible improvements that can be implemented to reduce this impact to a less than significant level. As a condition of approval, the City of Santa Clara will collect an impact fee equal to one dollar per square foot of development. This is consistent with City policy to collect fees from projects that have a significant impact on County expressways to fund regional facilities within the City of Santa Clara.

MM CTR-14: North First Street and Montague Expressway – The Comprehensive County Expressway Planning Study has identified the addition of a fourth through lane on westbound Montague Expressway as a Tier 1A priority. This improvement has also been identified in the North San José Deficiency Plan. The developer will pay a fair share contribution towards the addition of a fourth through lane on westbound Montague Expressway.

6.1.2.2 Conclusion

There are no feasible mitigation measures identified to reduce the identified cumulative impacts at the De La Cruz Boulevard/Central Expressway intersection (LOS F in PM Peak Hour). **(Significant Unavoidable Cumulative Impact)**

The Comprehensive County Expressway Planning Study identifies improvements for the following intersections:

San Tomas Expressway and Benton Street
San Tomas Expressway and Homestead Road
San Tomas Expressway and Stevens Creek Boulevard
San Tomas Expressway and Scott Boulevard
San Tomas Expressway and El Camino Real
Mission College Boulevard and Central Expressway

There is currently an adopted plan and funding for implementation of the identified improvements. These improvements would reduce the project's impacts at these intersections to a less than significant level. The City of Santa Clara, in cooperation with the Santa Clara County Roads and Airports Division has approved this mitigation. **(Less Than Significant Cumulative Impact with Mitigation)**

With implementation of the proposed identified mitigation for the San Tomas Expressway/Saratoga Avenue intersection and the Great America Parkway/Mission College Boulevard intersection, the proposed project would have a less than significant impact. **(Less Than Significant Cumulative Impact with Mitigation)**

The Comprehensive County Expressway Planning Study and the North San José Deficiency Plan identified improvements for the following intersections:

McCarthy Boulevard/O'Toole Avenue and Montague Expressway
North First Street and Montague Expressway
Montague Expressway and Trimble Road

These mitigations are not fully funded at this time, but the North San José Deficiency Plan has established a timeline and funding program for implementation. The fair share contribution payment by the project applicant will aid in the funding of the identified mitigation measures and will reduce the project's impact to a less than significant level. **(Less Than Significant Cumulative Impact with Mitigation)**

Even with implementation of the identified mitigation for the Bowers Avenue/Augustine Drive intersection, the intersection would still operate at an unacceptable LOS. There are no feasible

mitigation measures to reduce the identified impact to the Bowers Avenue/Augustine Drive intersection to a less than significant level. **(Significant Unavoidable Cumulative Impact)**

Even with implementation of the identified mitigation for the Zanker Road/Montague Expressway intersection, the intersection would still operate at an unacceptable LOS. There are no feasible mitigation measures to reduce the identified impact to the Zanker Road/Montague Expressway intersection to a less than significant level. **(Significant Unavoidable Cumulative Impact)**

6.1.3 Cumulative Air Quality Impacts

The BAAQMD guidance for CEQA documents provides that a project's cumulative impact is based on its consistency with the local General Plan and the local General Plan with the regional air quality plan (i.e., Clean Air Plan). The project is proposing to amend the City of Santa Clara General Plan in order to allow taller (and larger) buildings than are presently allowed by the General Plan land use designation, and is therefore not consistent with the Clean Air Plan (CAP). The project, along with the other pending office projects, would create additional industrial office space within close proximity to transit, regional roadways, and existing housing. Nevertheless, the substantial increase in jobs relative to available housing within the City would result in more employees commuting to work from other areas of Santa Clara County and possibility outside the County. The increase in traffic trips resulting from the proposed project and other pending office developments would significantly increase emissions of regional pollutants (i.e., particulate matter) and be inconsistent with the CAP.

The CAP identifies Transportation Control Measures (TCMs) that are intended to reduce vehicle miles traveled and associated air pollution impacts. The project will be required to implement the identified TDM measures, to the extent feasible, as a condition of approval.

Even with the implementation of the identified TCMs, the project will result in significant unavoidable cumulatively air quality impacts. **(Significant Unavoidable Cumulative Impact)**

6.1.3.1 Conclusion

Even though the overall development proposed by the project is consistent with some of the goals of the CAP and many of the City's General Plan, the project would have a significant unavoidable regional air quality impact. As a result, the project will contribute to significant and unavoidable cumulative regional air quality impact. **(Significant Unavoidable Cumulative Impact)**

6.1.4 Cumulative Water Supply Impacts

Implementation of the proposed project will result in a net increase in building square footage on the project site. While the square footage will increase, the total building coverage area will decrease due to the increased height of the proposed buildings. This will result in more green space areas on the project site, compared to existing conditions, that would require irrigation. Several other new office/industrial projects are pending in Santa Clara that would also increase the building square footage while decreasing the building coverage area. This substantial increase in green space throughout the industrial area of the City will increase the demand for water for irrigation purposes. The existing recycled water distribution system is not available to the proposed project but some of the pending projects will have access to the existing system. New development projects that are in proximity to the recycled water distribution system are required to use recycled water for

landscaping, cooling towers, and other suitable uses. The pending projects that have access to the recycled water supply are proposing to use recycled water for irrigation and cooling towers.

For projects without access to recycled water, the increased demand for irrigation water will have to be met using the potable water supply. This increase in irrigation water demand was, however, accounted for in the Water Supply Assessment and was determined to have a less than significant impact on the City's long term potable water supply.

6.1.4.1 Conclusion

Even though the overall development proposed by the project is consistent with the 2005 Urban Water Management Plan, the increase in green space in areas without access to recycled water places an additional burden on the existing potable water supply when combined with other similar "green campus" developments. Nevertheless, the Water Supply Assessment determined that there is sufficient water supply (using both potable and recycled water) to support all the currently proposed "green campus" developments long term. **(Less Than Significant Cumulative Impact)**

6.1.5 Cumulative Global Climate Change Impacts

This section provides a general discussion of global climate change and focuses on emissions from human activities that alter the chemical composition of the atmosphere. The discussion on global climate change and greenhouse gas emissions is based upon the California Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32), the 2006 Climate Action Team (CAT) Report to Governor Schwarzenegger and the Legislature, and research, information and analysis completed by the International Panel on Climate Change (IPCC), the United States Environmental Protection Agency, California Air Resources Board and the CAT. Estimates of greenhouse gas emissions for the project are provided in Appendix F of this EIR.

Global climate change refers to changes in weather including temperature, precipitation, and wind patterns. Global temperatures are modulated by naturally occurring and anthropogenic-generated (generated by mankind) atmospheric gases such carbon dioxide, methane, and nitrous oxide.⁴⁰ These gases allow sunlight into the Earth's atmosphere but prevent heat from radiating back out into outer space and escaping from the earth's atmosphere, thus altering the Earth's energy balance. This phenomenon is known as the greenhouse effect.

The world's leading climate scientists have reached consensus that global climate change is underway, is "very likely" caused by humans, and hotter temperatures and rises in sea level "would continue for centuries," no matter how much humans control future emissions. A report of the Intergovernmental Panel on Climate Change (IPCC) - an international group of scientists and representatives concludes "The widespread warming of the atmosphere and ocean, together with ice-mass loss, support the conclusion that it is extremely unlikely that global climate change of the past 50 years can be explained without external forcing, and very likely that it is not due to known natural causes alone."⁴¹

⁴⁰ IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: The Physical Science Bases. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D.Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available at: <http://ipcc.ch/>

⁴¹ *Climate Change 2007 - The Physical Science Basis Contribution of Working Group I to the Fourth Assessment Report of the IPCC*. February 2, 2007. [<http://ipcc-wg1.ucar.edu/wg1/wg1-report.html>]

Human activities have exerted a growing influence on some of the key factors that govern climate by changing the composition of the atmosphere and by modifying vegetation. The concentration of carbon dioxide in the atmosphere has increased from the burning of coal, oil, and natural gas for energy production and transportation and the removal of forests and woodlands around the world to provide space for agriculture and other human activities. Emissions of other greenhouse gases, such as methane and nitrous oxide, have also increased due to human activities. Carbon dioxide accounts for approximately 85 percent of total emissions, and methane and nitrous oxide account for almost 14 percent. Each of these gases, however, contributes to global warming at a different relative rate. Methane has a global warming potential 23 times that of carbon dioxide, while nitrous oxide is 296 times that of the same amount of carbon monoxide. To account for these differences, estimates of greenhouse gas emissions are often described in terms of carbon dioxide equivalents.

The IPCC predicts a temperature increase of between two and 11.5 degrees Fahrenheit (F) (1.1 and 6.4 degrees Celsius) by the end of the 21st century under six different scenarios of emissions and carbon dioxide equivalent concentrations.⁴² Sea levels are predicted to rise by 0.18 to 0.59 meters (seven to 23 inches) during this time, with an additional 3.9 to 7.8 inches possible depending upon the rate of polar ice sheets melting from increased warming. The IPCC report states that the increase in hurricane and tropical cyclone strength since 1970 can likely be attributed to human-generated greenhouse gases.

On a per-person basis, greenhouse gas emissions are lower in California than most other states; however, California is a populous state and the second largest emitter of greenhouse gases in the United States and one of the largest emitters in the world.⁴³ Transportation is the largest source of greenhouse gas emissions in California, followed by industrial sources and electric power generation.⁴⁴

According to the 2006 California Climate Action Team Report⁴⁵ the following climate change effects and conditions can be expected in California over the course of the next century:

- A diminishing Sierra snowpack declining by 70 percent to 90 percent, threatening the state's water supply;
- Increasing temperatures from eight to 10.4 degrees Fahrenheit (F) under the higher emission scenarios, leading to a 25 to 35 percent increase in the number of days ozone pollution levels are exceeded in most urban areas;
- Coastal erosion along the length of California and sea water intrusion into the Sacramento River Delta from a four-to 33-inch rise in sea level. This would exacerbate flooding in already vulnerable regions;

⁴² IPCC, 2007: Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. [<http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>]

⁴³ California Legislative Analyst's Office. 2006. *Analysis of the 2006-07 Budget Bill (Governor's Climate Change Initiative)*. [http://www.lao.ca.gov/analysis_2006/resources/res_04_anl06.html]

⁴⁴ California Environmental Protection Agency. 2006. *Climate Action Team Executive Summary Climate Action Team Report to Governor Schwarzenegger and the California Legislature*. [http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT_EXECSUMMARY.PDF]

⁴⁵ California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. [http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT.PDF]

- Increased vulnerability of forests due to pest infestation and increased temperatures;
- Increased challenges for the state’s important agricultural industry from water shortages, increasing temperatures, and saltwater intrusion into the Delta; and
- Increased electricity demand, particularly in the hot summer months.

6.1.5.1 Regulatory Context for Global Climate Change

Global climate change resulting from greenhouse gas emissions is an emerging environmental concern being raised and discussed at the international, national, and statewide level. At each level, agencies are considering strategies to control emissions of gases that contribute to global warming.⁴⁶ Regulatory efforts in California that apply to the project are summarized below.

6.1.5.2 State of California Executive Order S-3-05

In June 2005, the Governor of California signed Executive Order S-3-05 which identified Cal/EPA as the lead coordinating State agency for establishing climate change emission reduction targets in California. A “Climate Action Team”, a multi-agency group was set up implement Executive Order S-3-05. Under this order, the state plans to reduce greenhouse gas emissions to 80 percent below 1990 levels by 2050. Greenhouse gas emission reduction strategies and measures to reduce global warming were identified by the California Climate Action Team in 2006.⁴⁷

6.1.5.3 Assembly Bill 32 – The California Global Warming Solutions Act of 2006

Subsequently, in the fall of 2006, California AB 32, the global warming bill, was signed into law. AB 32 requires the state Air Resources Board (ARB) to adopt regulations by January 1, 2008 to require reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with that program. The bill requires achievement by 2020 of a statewide greenhouse gas emissions limit equivalent to 1990 emissions, and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions.

Greenhouse gas emission reduction strategies and measures to reduce global warming were identified by the California Climate Action Team in 2006 and the ARB in 2007. Strategies include, but are not limited to, new vehicle emission standards, enforcement of diesel truck anti-idling requirements, capture of more methane from landfills, hydrofluorocarbon (HCF) reduction strategies for the use and disposal of refrigerants, manure management in agricultural operations, and increased use of alternative fuels. In December 2007, the ARB outlined a reporting and monitoring program for greenhouse gases. Modifications to regulatory programs of various state agencies are on-going. An inventory of 1990 emissions has not been completed to date.

⁴⁶ On April 2, 2007, the United States Supreme Court issued a 5-4 decision in *Massachusetts v. EPA*, which holds that the U.S. Environmental Protection Agency has authority under the Clean Air Act to regulate greenhouse gas emissions from new vehicles. The U.S. EPA had previously argued it lacked legal authority under the Clean Air Act to regulate greenhouse gases. The majority opinion of the Supreme Court decision noted that greenhouse gases meet the Clean Air Act’s definition of an “air pollutant,” and the EPA has the statutory authority to regulate the emission of such gases from new motor vehicles.

⁴⁷ California Environmental Protection Agency. 2006. *Climate Action Team Executive Summary Climate Action Team Report to Governor Schwarzenegger and the California Legislature*. [http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT_EXECSUMMARY.PDF]

AB32 requires ARB to adopt mandatory reporting rules for sources of substantial greenhouse gases by January 1, 2009, adopt a plan for reducing greenhouse gas emissions by January 1, 2009 that outlines how emission reductions will be achieved, and adopt regulations by January 1, 2011 to obtain the maximum technologically feasible and cost-effective reductions in greenhouse gases.

6.1.5.4 Senate Bill 97 – Modification to the Public Resources Code

On August 24, 2007, Governor Schwarzenegger signed SB 97, which requires the Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, including, but not limited to effects associated with transportation or energy consumption. The Resources Agency is required to certify and adopt these guidelines by January 1, 2010.

Currently there is no established guidance, from the state or in published CEQA case law, for the determination of what constitutes a significant global climate change impact or what measures are necessary to off-set new greenhouse gas emissions.

6.1.5.5 Existing Baseline Emissions

Under existing conditions, greenhouse gas emissions from human activities at the project site are limited to mobile sources from equipment used to maintain the landscaping and automobiles used by employees.

6.1.5.6 Thresholds of Significance

Under State Senate Bill 97 (August 2007), the State Office of Planning and Research is to certify and adopt guidelines for evaluation of the effects of greenhouse gas emissions and mitigation of those effects by January 1, 2010. Neither CEQA nor the CEQA Guidelines currently provide any methodology for analysis of greenhouse gases. Absent established standards for gauging the significance of greenhouse gas emissions, a primarily qualitative approach will be used to evaluate possible impacts for this project.

For the purposes of this EIR, a global climate change impact is considered significant if the project would:

- result in substantial new greenhouse gas emissions; or
- be adversely impacted by sea level rise of two to three feet.

At this time, for a project to be a substantial source of new greenhouse gas emissions it would have to meet the following criteria:

- result in a net increase in greenhouse gas emissions, in terms of carbon dioxide equivalents, that could substantially impede local, regional or statewide efforts to reduce overall greenhouse gas emissions to 1990 levels; or
- is inconsistent with carbon dioxide emission reduction strategies contained in the 2006 Final Report by the California Climate Action Team.

6.1.5.7 Global Climate Change Impacts

Given the global scope of global climate change and the large quantity of greenhouse gas emissions, the challenge under CEQA is for a Lead Agency to present information on the possible impacts of a project on global warming in a way that is meaningful to the decision making process. Under CEQA, there are two essential questions: would a project increase or substantially contribute to an environmental impact *or* would the project be subject to impacts from the environment associated with global climate change.

Accordingly, projects can both contribute to global climate change and be exposed to impacts from global climate change, and mitigation measures can be identified to minimize project impacts to and from global climate change.

6.1.5.8 Greenhouse Gas Emission Impacts from the Project

The proposed project would increase emissions, relative to existing conditions, by the construction of new buildings and increasing the number of jobs on-site thereby increasing the daily traffic trips to and from the site. Greenhouse gas emissions from the proposed project would include vehicle exhaust, construction emissions from construction vehicles and machinery, and emissions from the generation of electricity to operate the buildings.

Currently, there is not one model capable of estimating all of a project's direct and indirect greenhouse gas emissions.⁴⁸ One model, the URBEMIS 2007 model (Version 9.2) can estimate vehicle miles traveled for a particular project and the carbon monoxide emissions from transportation and other land use factors (i.e., combustion products for on-site heating); however, it does not estimate other energy use or greenhouse emissions from the generation of electricity for lighting, cooling, pumping water, or other uses.

For the purposes of this EIR, the significance of emissions of greenhouse gases will be evaluated based on a qualitative discussion of estimated net new greenhouse gas emissions, measures included in the project to reduce greenhouse gas emissions, and the consistency of the proposed project with strategies for reducing future greenhouse gas emissions identified by the California Climate Action Team in 2006. For transportation, an estimate of net emissions under the proposed project was made using the URBEMIS 2007 model. An estimate of possible greenhouse gas emissions from electricity use was also made based upon U.S. Department of Energy factors. These factors may be higher than energy use rates for buildings meeting the State of California Energy Code (California Code of Regulations Title 24, Part 6). The following discussion is a good faith effort at estimating possible greenhouse gas emissions from transportation and electricity use.

Vehicle Emissions

Emissions of air pollutants associated with the project were predicted using the URBEMIS2007 model (Version 9.2), distributed by the California Air Resources Board and recommended for use by the BAAQMD. This model predicts daily emissions associated with land use developments. The model combines predicted daily activity, associated with the industrial land use type, with emission factors from the State's mobile emission factor model (i.e., EMFAC2007). The net new daily trips are estimated to be 6,818 and the estimated net new vehicle miles traveled (VMT) is 51,195 miles per

⁴⁸ California Air Pollution Control Officers Association. 2008. *CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*.

year.⁴⁹ Based on the carbon dioxide emission rate assumptions in the model, the net new carbon dioxide vehicle emissions would be approximately 8,388 metric tons per year.

Electricity Use

As discussed in Section 4.12, *Energy*, the proposed project would result in a net increase in electricity use of approximately 10.3 million kWh/year. The generation of electricity through the combustion of fossil fuels typically yields carbon dioxide as well as smaller amounts of nitrous oxide and methane.

Using data from the U.S. Department of Energy, Energy Information Administration Office of Integrated Analysis of forecasting and the estimated electricity use for build out of the site, it is estimated that the additional development on the site would result in an increase in emissions from the site of approximately 6,278 metric tons of carbon dioxide a year, 0.0690 metric tons of methane a year, and 0.0381 metric tons of nitrogen oxide a year.⁵⁰ Table 17 summarizes the emissions from the proposed project.

TABLE 17			
Summary of Project Build Out Greenhouse Gas Emissions from Electricity Use			
Land Use	Carbon Dioxide (metric tons/year⁵¹)	Methane (metric tons/year)	Nitrogen Oxide (metric tons/year)
Existing Industrial	3,442	0.0378	0.0209
Proposed Project (net increase)	6,278	0.0690	0.0381
Project Site Total	9,720	0.1068	0.0590

Other Emission Sources

Additional unknown quantities of greenhouse gases would be emitted, if the site is redeveloped as proposed, from the manufacture and transportation of building materials, the operation of construction equipment, and other construction related activities. There currently are no readily available methods of quantifying additional greenhouse gases from the manufacturing and transportation of building materials, the operation of construction equipment, or other activities and sources (other than electricity and automobile use). For this reason, it can be assumed that the projects total greenhouse gas emissions are more than what was identified above.

Strategies to Reduce Greenhouse Gas Emissions

Given the relatively large contribution of greenhouse gases from the State of California as a whole, the State of California is in the process of implementing identified strategies to reduce emissions. Strategies in the *Final Climate Action Team Report to the Governor and Legislature* (2006) that apply to the proposed project are listed in Table 18 below.

⁴⁹ Assumes an average trip length of approximately eight miles.

⁵⁰ United States Department of Energy, Energy Information Administration Office of Integrated Analysis and Forecasting. Updated State-level Greenhouse Gas Emission Coefficients for Electricity Generation 1998-2000. April 2002.

⁵¹ One U.S. ton is equivalent to 1.102 metric tons.

TABLE 18 Consistency of Project with Applicable State of California Climate Change Emission Reduction Strategies¹		
Responsible State Agency	Strategy	Consistency
Climate Action Team	Smart Land Management and Intelligent Transportation	Partial. The project would place jobs in an existing job center within close proximity to public transit, but not near housing.
Business, Transportation and Housing	Measures to Improve Transportation Energy Efficiency.	Partial. The project site is located in a centralized job center in close proximity to transit, but not near housing.
Energy Commission	Building Energy Efficiency Standards in Place (see Project Description)	Yes. The proposed project will include energy efficient designs in an effort to achieve LEED certification which will reduce the overall energy consumption of the proposed buildings.
Department of Water Resources	Water Use Efficiency (see Project Description)	Yes. Saving water saves energy, and consequently reduces emissions. To reduce the amount of electricity, natural gas, and diesel used to convey, treat, and distribute water, the project would use efficient water management practices.
Integrated Waste Management Board	Achieve 50 percent Statewide Recycling Goal (see Project Description and Section 4.11.2.5)	Yes. The project would assist local jurisdictions to achieve recycling goals and reduce methane production by diverting waste from landfills.
Integrated Waste Management Board	Zero Waste-High Recycling	No. No recycling program for construction debris or facility operations is proposed beyond what is required by the City.
Notes: ¹ California Environmental Protection Agency. 2006. <i>Climate Action Team Report to Governor Schwarzenegger and the Legislature</i> . [http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT.PDF]		

Impact C-GCC-1: The project would result in a net increase in carbon dioxide emissions. It is partially consistent with strategies to reduce VMT per capita over time in that it proposes development within an existing urban area, near public services and transit. It is not near a supply of housing that would serve the new employees. When combined with other cumulative development, the project would result in a cumulatively significant contribution to a significant cumulative global climate change impact. **(Significant Cumulative Impact)**

6.1.5.9 Impacts to the Proposed Project from Global Climate Change

As stated above, climate change effects expected in California over the next century could include reduced water supply, impacts from sea level rise, and increase electricity demand (particularly in the summer months).

Impacts to the project from global climate change could include reduced water availability due to droughts. Water would be used on the site for potable water supplies plumbing fixtures, laboratories, and landscape use. At this time, based on recent case law, neither the State Department of Water

Resources nor the Santa Clara Valley Water District has established the effects of global climate change on water supplies in California or locally.⁵²

The project site is located approximately 3.4 miles from San Francisco Bay (as the crow flies) and is at an elevation of 40 to 43 feet above sea level. Because the elevation of the site, it is not within possible inundation areas from an up to three meter (approximately 10 feet) rise in sea level. The project, therefore, would not be directly impacted by sea level rise.

Energy use on the project site could rise during hot summer months because energy use for building cooling could increase. In the event regional demand exceeded supply, this could result in temporary interruptions in power supply. For the proposed land use, this would be primarily an economic rather than an environmental impact and is not discussed further. The proposed project would not be directly impacted by predicted sea level rise. **(Less Than Significant Cumulative Impact)**

6.1.5.10 Mitigation and Avoidance Measures

MM C-GCC-1.1: The proposed project will be built to LEED Silver certification requirements and will incorporate the recommended Build It Green design concepts to the extent feasible.

6.1.5.11 Conclusion

Reducing greenhouse gas emission levels from 2020 to 1990 levels as required under AB 32 could require a 28 to 33 percent reduction of “business-as-usual” greenhouse gas emissions depending on the methodology used to determine the future emission inventories.⁵³ Although the exact percent reduction that would be incorporated in the future design of campus buildings is not known, the reductions in energy use called for in the LEED certification and Build It Green requirements cannot be considered to fully mitigate the projected increases in greenhouse gas emissions from the project. The project, even with implementation of identified energy reduction policies, would result in a significant unavoidable contribution to cumulative global climate change impacts. **(Significant Unavoidable Cumulative Impact)**

⁵² Santa Clarita Oaks Conservancy, et al v City of Santa Clarita, et al., Los Angeles Superior Court Case No. BS084677, August 15, 2007.

⁵³ California Air Pollution Control Officers Association, 2008. *CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions for Projects Subject to the California Environmental Quality Act*. January 2008.

Section 15126.6 of the CEQA Guidelines requires that an EIR describe a reasonable range of alternatives to the proposed project that could feasibly attain most of the project objectives while avoiding or considerably reducing any of the significant impacts of the proposed project. In addition, the No Project Alternative must be analyzed in the document.

In order to comply with the purposes of CEQA, it is necessary to identify alternatives that reduce the significant impacts that are anticipated to occur if the project is implemented, but to try to meet as many of the project's objectives as possible. The Guidelines emphasize a common sense approach—the alternatives should be reasonable, should “foster informed decision making and public participation,” and should focus on alternatives that avoid or substantially lessen the significant impacts.

The stated objectives of the project proponent are to:

1. Create a cohesive campus environment for future corporate tenant(s) that includes flexible and adaptable space for growth.
2. Redevelop an underutilized site into a more efficient, economically viable campus.
3. Provide for increased density in a geographically constrained area to retain jobs and foster job growth within the City of Santa Clara.
4. Develop a project that will qualify for construction financing and is economically viable to operate and maintain.

An EIR is required to include a “No Project” alternative that “compares the impacts of approving the proposed project with the impacts of not approving the proposed project.”

The significant impacts identified in this EIR as resulting from the proposed project include significant unavoidable traffic and air quality impacts, and induced population growth resulting from increasing Santa Clara's jobs/housing imbalance. There are also cumulatively significant impacts of increased traffic congestion and increased air pollution, plus a cumulatively considerable contribution to global climate change which is linked in part to the traffic and air pollution.

Since the traffic impacts result from the volume of traffic generated by the proposed level of development on the project site, and the induced growth also results from the substantial increase in jobs proposed by this redevelopment, the logical way to reduce those impacts would be to reduce the amount of development. In addition, the vehicular air pollutant emissions are reduced proportionately with reductions in project size and vehicle trip generation. A reduced size alternative is discussed below. The global climate change impacts are also associated with the proposed location of a substantial number of jobs in Santa Clara, a city with a significant job/housing imbalance. Any alternative location in Santa Clara would also have a similar result, so an alternative location that is within the City's control would have similar impacts

A. NO PROJECT ALTERNATIVE

The CEQA Guidelines [§15126(d)4] require that an EIR specifically discuss a “no project” alternative, which should address both “the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project is not approved, based on current plans and consistent with available infrastructure and community services.” Since the project site is currently developed with industrial development, the alternative to the City approving the currently proposed project would be to maintain the site as is. If the project site were to remain as is there would be no new impacts. All the assumed traffic of those buildings is already included in the background conditions (i.e., the City’s approved trip inventory) and the air pollutants associated with vehicle trips to and from those buildings are already accounted for in the CAP.

The existing buildings on the project site are, however, approximately 30 years old and are not built to current water and energy conservation standards. If the proposed project does try to achieve LEED certification through the use of energy efficient lighting and other electrical systems, low flow water fixtures, the use of recycled materials, and other standard measures, there could be a net reduction in the carbon footprint associated with the development. Even highly efficient construction practices and new buildings, however, would not fully offset the impacts of the substantial traffic increases and induced population growth at locations distant from the jobs proposed.

Conclusion: Implementation of the “No Project” alternative would avoid the significant traffic and air quality impacts identified in this EIR. The No Project alternative would not, however, be compatible with current trends toward more sustainable building construction. This alternative does not meet any of the objectives of the proposed project.

B. REDUCED DENSITY ALTERNATIVE

The project site is currently designated *Light Industrial* and is developed with 11 light industrial buildings. In an effort to avoid the significant traffic and air quality impacts that would result from the proposed project but still provide high density industrial/office space, this alternative proposes a smaller, reduced density development.

Under the reduced density alternative, the project would still propose a General Plan amendment to *Office/Research and Development* and a rezoning to *PD – Planned Development*. The project would still be developed in multiple towers with parking garages to maximize green space on the project site. The project would still include sustainable building designs in an effort to achieve LEED certification. This alternative would, however, only propose 1.5 million square feet of office and laboratory space, a reduction of 450,000 square feet compared to the proposed project.

Based on LOS calculations by *Hexagon Transportation Consultants*, the development of only 1.5 million square feet of industrial/office space would avoid two significant LOS impacts identified under the proposed project. The impacts to the San Tomas Expressway/Walsh Avenue (Santa Clara) intersection and the Montague Expressway/Trimble Road (San Jose and CMP) intersection would be avoided under this alternative. In addition, the following significant freeway impacts identified under project conditions would be avoided under the reduced project alternative:

US 101, northbound between Old Bayshore Highway and North First Street

US 101, northbound between North First Street and SR 87

US 101, southbound between Montague Expressway and De La Cruz Boulevard

US 101, southbound between SR 87 and North First Street
US 101, southbound between North First Street and Old Bayshore Highway
US 101, southbound between Old Bayshore Highway and I-880

While vehicular air pollutant emissions are reduced proportionately with reductions in project size and vehicle trip generation, the reduction in square footage would not be sufficient to reduce the identified significant unavoidable regional air quality impact to a less than significant level.

All other identified impacts, including significant traffic impacts to eight intersections and two freeway segments, would be the same or incrementally less than the impacts of the proposed project and would be reduced to a less than significant level by the General Plan policies and mitigation measures listed in this EIR.

The reduced density alternative would meet most of the objectives of the proposed project.

Conclusion: Implementation of Alternative B would avoid the some of the significant unavoidable traffic and air quality impacts identified in this EIR. This alternative does not meet all the project objectives.

C. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the above discussion, the environmentally superior alternative is Alternative B because the project's significant environmental impacts would be less than with the proposed project. Alternative B would not meet all of the objectives of the proposed project.

While Alternative B is environmentally superior to the proposed project, Alternative B is infeasible for the following reasons:

1. The environmentally superior alternative fails to allow the maximum amount of space required by the corporate user to meet its identified, specific and immediate growth needs.
2. The environmentally superior alternative limits job creation in a geographically constrained area when compared to the proposed project.
3. The environmentally superior alternative impedes the creation of an economically viable campus. Specifically, because the cost of the land is a fixed cost, as the size of the project decreases the cost per employee increases. The alternative project of 1.5 million square feet

A significant unavoidable impact is an impact that cannot be mitigated to a less than significant level if the project is implemented, because no feasible mitigation has been identified. The following significant unavoidable impacts have been identified:

- Implementation of the proposed project will result in a net increase in industrial/office space within the City of Santa Clara. Because Santa Clara has more jobs than available housing, the project could induce housing growth in areas outside the City and would exacerbate the existing jobs/housing imbalance.
- The intersections of De La Cruz Boulevard/Central Expressway and North First Street/Montague Expressway will all operate at an unacceptable LOS during at least one of the peak hours.
- Implementation of the proposed project would result in impacts to eight freeway segments in the project vicinity.
- Implementation of the proposed project would generate regional air pollutants in excess of established thresholds.

All other significant impacts of the proposed project would be reduced to a less than significant level with the implementation of General Plan policies and mitigation measures identified in this EIR

SECTION 9.0 IRREVERSIBLE ENVIRONMENTAL CHANGES AND IRRETRIEVABLE COMMITMENT OF RESOURCES

CEQA and the CEQA Guidelines require that an EIR address “significant irreversible environmental changes which would be involved in the proposed project, should it be implemented.” [§158126(c)]

If the proposed project is implemented, development of this site would involve the use of non-renewable resources both during the construction phase and future operations/use of the site. Construction would include the use of building materials, including materials such as petroleum-based products and metals that cannot reasonably be re-created. Construction also involves significant consumption of energy, usually petroleum-based fuels that deplete supplies of non-renewable resources. Once the new developments are complete, occupants will use non-renewable fuels to heat and light the buildings. The proposed project will also consume water at a higher rate than the current land use.

The City of Santa Clara encourages the use of building materials that include recycled materials, and makes information available on those building materials to developers. New buildings will be built to current codes, which require insulation and design to minimize wasteful energy consumption. The proposed high-density office towers would be constructed to LEED Silver standards and would, as a result, use less energy for heat and light and less water than the existing buildings. The project would also have more open space and less impermeable surfaces than the existing development. In addition, the site is an infill location and is currently served by public transportation. The site provides an expansion of job opportunities that are more reasonably proximate to existing housing in Santa Clara and San José than alternative housing in the south county and other counties to the north. The proposed project will, therefore, facilitate a more efficient use of resources over the long term.

SECTION 10.0 GROWTH INDUCING IMPACTS OF THE PROJECT

For the purposes of this project, a growth inducing impact is considered significant if the project would:

- cumulatively exceed official regional or local population projections;
- directly induce substantial growth or concentration of population. The determination of significance shall consider the following factors: the degree to which the project would cause growth (i.e., new housing or employment generators) or accelerate development in an undeveloped area that exceeds planned levels in local land use plans;
- indirectly induce substantial growth or concentration of population (i.e., introduction of an unplanned infrastructure project or expansion of a critical public facility (road or sewer line) necessitated by new development, either of which could result in the potential for new development not accounted for in local general plans).

The project is proposed on a currently developed site within the City of Santa Clara. The site is surrounded by existing infrastructure and both existing and planned development. Development of the project will not require upgrades to the existing infrastructure. Therefore, it will not include any significant expansion that would facilitate growth in other areas of the City.

Redevelopment of the project site would place a high-density office development in the middle of an industrial area. The proposed project would be compatible with the surrounding land uses and would not pressure adjacent industrial properties to redevelop with new or different land uses. The project would, however, impact the jobs/housing imbalance by adding more jobs to a job-rich City. Workers would likely need to commute from other areas of the County and it is possible that new housing would be needed to support the job growth. Therefore, the project would indirectly induce new residential development.

The project would have a significant growth inducing impact.

SECTION 11.0 LEAD AGENCY AND CONSULTANTS

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